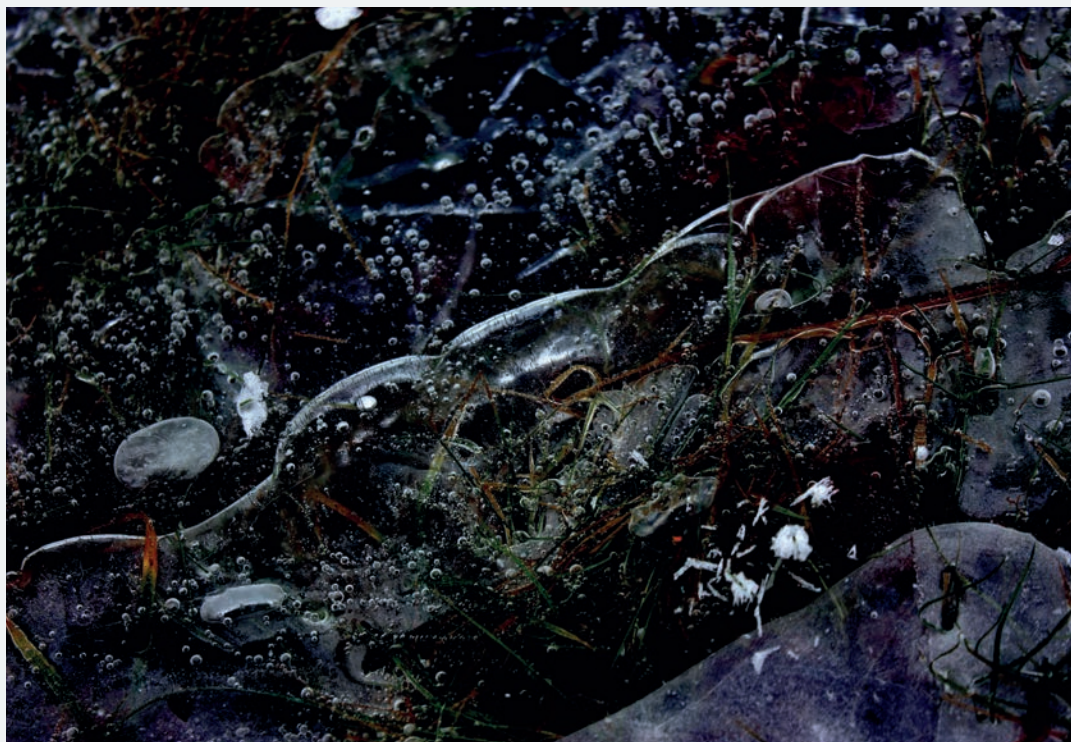


Göttinger Studien zur Kulturanthropologie / Europäischen Ethnologie  
Göttingen Studies in Cultural Anthropology / European Ethnology



Edda Starck

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## Amongst Aliens and Ghosts

More-than-human temporalities of  
Scottish rewilding landscapes

Universitätsverlag Göttingen

**KAAEE**



Edda Starck  
Amongst Aliens and Ghosts

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To my mother Barbara, who inspired most of the contents of this book,  
My grandmother Pia, who has us all believing that she lives beyond time,  
And to my godmother Helga, a true artist-scientist who has taught  
me to see the creative spirit inherent in all beings.





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## Introduction

Urgency is the name of our Zeitgeist. Our Zeitgeist has many names of course, each with infinite incarnations. But, beginning the writing of this book in the eventful year of 2020, during which many kinds of urgencies collided with a loud bang, the feeling of urgency is what stands out most to me. This piece will tell stories of urgencies and how some people have come to deal with them. These stories are emblematic of what is oftentimes referred to as the *Anthropocene*, a neologism that describes the geological era we are currently living in – a time in which we, the *anthropoi*, have come to influence every part of the Earth. Through capitalist exploitations and never-ending pollution, we – some of us more and some of us less – have shook our planet all the way to the core.<sup>1</sup> The impact can be seen in the skyrocketing numbers of climate disasters such as mass extinctions and global health threats. En-

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<sup>1</sup> An important critique of the term points out that not all humans participate in this process equally, or rather, that the destructive implications of people's world-making project are diverse (Tsing 2015:19). Plenty of other "-cenes" have been conjured in response, some of which will surface later on.

Andrew Mathews, furthermore, suggests to think of Anthropocenes in the plural, arguing that the Anthropocene is not one coherent story that everyone experiences and participates in equally, but rather a vast array of histories and more-than-human relations, each of which "gives rise to a diverse set of political imaginations and causal accounts of how the environment might change in the future" (Mathews 2017 G154).

vironmental organisations and climate activists constantly highlight the urgency of responding to these catastrophes and tackling their causes if we want to assure the future of life on Earth.

The notion of urgency brings along questions about time. What pasts do we refer to when conjuring narratives of healthy environments? Whose present do we speak of when we discuss environmental degradation? And in what ways do these temporal references shape our visions of futures? Paul Huebener writes that “the environmental crisis is, in many ways, a crisis of time.”<sup>2</sup> This book latches onto this problematic, which serves as a starting point from where it explores relations between time and environment. The subjects of my study are rewilding initiatives, conservation projects that constitute particular kinds of responses to narratives of eco-temporal collapse. My interest in rewilding was first sparked by the striking contrast between the sense of urgency resonating through discourses on environmental change and the slow, open-ended approach generally pursued by rewilders. What happens with time when we try to undo its crisis? The aim of my study is to better understand how rewilders’ engagement with their multispecies environments is informed by, and brings to the forefront, diverse temporalities, and how these may be useful in envisioning healthier worlds.

## Times, Clocks, Temporalities

What then is time? If no one asks me, I know: if I wish to explain it to one that asketh, I know not. – Augustinus of Hippo (2008 [c.400]: 332)

There was a time in my childhood when I was still too young to be home alone after school but already too old to enjoy staying at the kindergarten that was the only childcare facility nearby. So, every day I walked up the steep hill to the Max Planck Institute for Ornithology in Andechs to pass the afternoon at my mother’s workplace. Taking the side entrance to the property, the first building I encountered was the “Bunker.” It was visible only in form of a long and deep entrance way with concrete walls, taking you to a big and heavy door that led directly into the overgrown hillside [Figure 1]. Behind this door, the biologists at the institute conducted ground-breaking experiments between 1964 and 1989: One at a time, hundreds of volunteers spent up to ninety-day-long stints inside the bunker, isolated entirely from natural light and other potential time indicators. The aim of this research was to find out whether the biological functions of humans that are related to time, such as sleep and waking cycles, or peaks and lows in body temperature, are regulated entirely by external factors like daylight or human-made time tellers, or whether they are coordinated by some sort of “inner clock.” The results provided clear evidence for the existence of such inner clocks expressed through “circadian rhythms,” as even

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<sup>2</sup> Huebener 2020: 1.



*Figure 1: Entrance to the bunker in Andechs. Photograph by Barbara Helm.*

in the total isolation of the bunker repetitive daily patterns in physiological activity quickly became apparent. Interestingly, the research also showed that the lengths and timings of these inner clocks can differ drastically between individuals. For most participants, their inner clocks ran slightly slower than the 24-hour day by which we generally organize our lives.<sup>3</sup> Our inner clocks, in other words, tick to their own beats: they rarely synchronise perfectly with our surroundings, and even amongst our species, drastic differences between internal timings exist.<sup>4</sup>

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<sup>3</sup> At the extreme end, the inner clocks of some participants turned out to be as slow as thirty hours between waking phases, that is per “inner day.” This caused some of trouble, as many of the volunteers were students preparing for important exams. When their ninety-day stay ended earlier than anticipated, many hadn’t made it all the way through their study plans yet – though universities usually accommodated for their slow clocks and pushed their exams back a few days. Another anecdote I learned from my mother regards the early phase of the Andechs Bunker experiments, when the director of the institute insisted that participants should be provided with one free beer a day, brewed at the village monastery. This soon became a problem, as curious and bored participants began to use the beer bottles as time-tellers to count the days they had spent in isolation, a sort of “beer calendar.” This quickly ended the golden age of free bunker beer.

<sup>4</sup> These inner clocks exist in other species too (see for instance Helm 2021).

As this anecdote illustrates, even within a Western scientific rationale many clocks and times can coexist. Rather than thinking of time and temporality in the singular, focussing on their multiplicities (for instance, bodily times, environmental times, etc) can be highly productive. Social scientists have written about diverse times extensively, an important milestone being for instance Émile Durkheim's work on "social time." Here, Durkheim analyses how we organize time communally through the frequencies and rhythms of rituals, which are manifested within "objective signs" such as calendars.<sup>5</sup> Time, in his reasoning, should be thought of as inherently social, both derived from, and constitutive of society.<sup>6</sup>

More recently, anthropological analyses have shifted their focus to the political constructions of time, in particular within the domains of economy and social justice. Laura Bear argues that within capitalisms, "time is both reduced and abstracted to a technique for bringing capital into being."<sup>7</sup> This close link between concepts of time and economy is evident in language, manifested in phrases like "saving" or "spending" time. Elizabeth Freeman adds another important layer to the political deconstruction of time through her notion of "chrononormativity."<sup>8</sup> Writing about the lives of queer persons, whose temporal experiences do not always align with societal norms, she uses chrononormativity to describe the hegemonial regimes of time that govern lives.<sup>9</sup>

Time regimes are established and maintained in myriad ways, many of them connected to the material artefacts that tell or represent time. Clocks and other technologies that segment time into countable units make it easy to believe in the existence of a singular time, which passes regularly and objectively. Yet, these time-reckoning devices are also the products of long and complex histories.<sup>10</sup> Critiquing a definition of time as singular and objective, philosopher Michelle Bastian compares clocks to tools of spatial navigation: The idea that maps are apolitical, impartial representations of space has been widely criticized.<sup>11</sup> Why is this critique rarely ever transferred to clocks and other time-reckoning devices? Anthropologist Kevin Birth similarly takes note of the strong grasp time objects have on our thinking, writing that "the concepts of time embedded in the cognitive artifacts used for time reckoning shape our cognitive processes about time so much so that it becomes a challenge to think

<sup>5</sup> Durkheim 1995[1912]: 9–10.

<sup>6</sup> An oversight over earlier canonical anthropological theories on time is provided by Gell (1992).

<sup>7</sup> Bear 2016: 491.

<sup>8</sup> Freeman 2010.

<sup>9</sup> Similarly, Luciano (2007) writes about chronobiopolitics, temporal tools to gain governance over bodies.

<sup>10</sup> Huebener 2020: 31. The restructuring of time has been an important tactic of colonial regimes (e.g. in Abid and Emilijanowicz 2019). Tellingly, one of the four countries in the world to not have adopted the European Gregorian calendar is Ethiopia, one of only two African countries that has successfully resisted long-term European colonization. Elsewhere, the globalization of Gregorian calendar and clock time continue to be resisted against today (see e.g. Pickering 2004 for a study on indigenous Lakota resistance against Western clock time).

<sup>11</sup> Bastian 2017: 47.

about time in any way other than what the artifacts dictate.”<sup>12</sup> It is notable that the researchers at the institute in Andechs chose to use the term of the “inner *clock*,” thus referring to a human-made, non-physiological time-telling device to describe the workings of circadian rhythms. Arguably, this term stands in contrast to their theory that time is not structured exclusively by extra-corporeal influences. Yet, the clock with its measurability and seeming regularity is too powerful a metaphor to resist, showing the extent to which objects of time structure our thinking about time.

One of the potential problems with relying overly on objects to mediate our sense of time is that they function independently from our ecological experiences. Birth writes that “humans have created objects based on ideas of time deliberately divorced from terrestrial experience.”<sup>13</sup> An example is the replacements of the sundial with clocks: mechanic clocks can be attuned to one another, and tick more evenly than the sun moves. Yet, they will never tell you the time-of-the-day accurately, and they do not account for the irregular shapes and movements of our planet.<sup>14</sup> Mechanic clocks facilitate the treatment of time as calculable and thus manageable, but do not necessarily help us know the multispecies worlds we live in. This is not to say that we should necessarily abandon mechanic time-reckoning devices: Bastian calls for the establishment of a “critical horology” movement, inviting us to question how we perceive the meaning and definition of clocks.<sup>15</sup> Bastian uses her long-term research on the temporalities of leatherback turtles (*Dermochelys coriacea*) to propose an alternative way of telling time. Leatherbacks live by long and infrequent temporal cycles and movement patterns, which tell the times of warming oceans, increased fishing pressure, and unstable weather conditions. Bastian therefore suggests seeing the *turtles as clocks* – ones that are “less predictable, but maybe more accurate for the times we live in.”<sup>16</sup>

Bastian is not the first to recruit more-than-humans into her reimagination of clocks. In the 1750s, biologist Carl Linnaeus conjured up a floral clock, which he called the “horologium florum.”<sup>17</sup> As a botanist, Linnaeus knew of the circadian rhythms of plants, which cause each flower species to open its blossoms at a specific time of the day.<sup>18</sup> For his horologium florum, Linnaeus therefore envisioned a flower garden, through which one can tell the hour simply by noting which blossoms are open and which are closed. He even wrote a list of flowers whose rhythmicity he

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<sup>12</sup> Birth 2012: 25.

<sup>13</sup> Birth 2012: 2.

<sup>14</sup> Huebener 2020: 30.

<sup>15</sup> Bastian agrees with Birth that clocks are politically constructed but argues that since they are designed, they can also be adapted to cater for more complex notions of time: “clocks are not fundamentally tied to linear and objective time, or even necessarily capitalist time, but instead have the potential to be redesigned as part of challenging and transforming dominant understandings of time” (2017: 43).

<sup>16</sup> Bastian 2012: 41.

<sup>17</sup> Thank you to Barbara Helm for first drawing my attention to the horologium florum.

<sup>18</sup> Gardiner 2007[1987]: 1.

deemed reliable but never ended up planting the clock. A few gardeners have tried to create floral clocks, but, holding on to the idea that the flowers ought to align with mechanical clock time, their successes were often considered to be marginal.<sup>19</sup>

Another experimental project, the “Circadian Clock” (2015) by artist Anaïs Moisy seeks to challenge the singularity of clock time.<sup>20</sup> Her Circadian Clock resembles a conventional clock face but instead of featuring numbers, the surface is engraved with the patterns of lace lichen (*Ramalina menziesii*) that are important indicators of environmental health. The clock is equipped with Wi-Fi, through which it receives information on sunrise and sunset times. Its only hand performs one singular rotation across the surface during daylight hours, and a second one during the hours of darkness. The speed of the needle’s movement across the clock face thus depends on the amount of daylight hours, the time of the year, and the geographic location of the clock. In its use of daylight as a temporal indicator, the Circadian Clock can be read as a reference to the sundial.<sup>21</sup> Thereby, it reminds the viewer of the long history of time telling, throughout which factors such as the remaining time of daylight were often much more important parameters of temporal knowledge than the exact calculability of the hour. Regardless of our conceptual organization of time, environmental conditions like the cycles of natural light and darkness continue to push and pull on our bodies. The Circadian Clock points at the extent to which we are desensitized to these temporal experiences in our daily lives, and offers an opportunity to connect to societally deprioritized forms of time.<sup>22</sup> It shows that, just like turtles, flowers, and light, everything may be seen as a clock ticking to its own time, with the ability to address “temporal problems that operate according to different sets of logics.”<sup>23</sup> Perhaps the Andechs chronobiologists weren’t that far off with their terminology after all?

But why is it so important to approach time in a pluralized way? For one, acknowledging the plurality of time is a first step to confront hegemonial chrononormativities.<sup>24</sup> Secondly, it allows us to see how different times and temporalities come together, clash, and make worlds (un)liveable. Their accumulations are what Barbara Adam calls “timescapes,” “a cluster of temporal features, each implicated in all the others but not necessarily of equal importance in each instance.”<sup>25</sup> Reminiscent of the word landscape, “timescape” reminds of the important correlation

<sup>19</sup> Birth criticizes the use of the clock metaphor (2012: 47).

<sup>20</sup> Moisy 2015.

<sup>21</sup> Bastian 2016: 12.

<sup>22</sup> Moisy 2015.

<sup>23</sup> Bastian 2016: 12.

<sup>24</sup> As Johannes Fabian (1983) has argued, it is particularly important to critically examine how anthropological practices have contributed to the temporal construction of its subjects, which have historically framed indigenous and colonized communities as belonging to the (singular, Eurocentric) past and as somehow opposed to modernity.

<sup>25</sup> Adam 2004: 143.



between time and space.<sup>26</sup> The concept aligns well with Anna Tsing's "polyphonic assemblages," which is what she calls the agentive and always changing more-than-human accumulations that constitute landscapes and ecosystems. In order to challenge rigid conceptualizations of "nature" and "ecosystems" as passive and static, Tsing defines polyphonic assemblages as "gatherings of ways of being" that, like the independent melodic lines of polyphonic music, delve in and out of closeness with each other in altering harmonies and dissonances.<sup>27</sup> She derives this concept out of her collaborative research, in which she studies multispecies relations and rhythms in their economic and political contexts to see how they make possible the flourishing of an uncultivable gourmet mushroom in post-industrial sites across the globe. "The polyphonic assemblage is the gathering of these rhythms as they result from world-making projects, human and not human."<sup>28</sup> But while Tsing's fungi have found a "possibility for life in capitalist ruins," Birth reminds us that our engagement with time generally causes a lot of trouble.<sup>29</sup> He explains that "the effort to achieve temporal standardization and uniformity has not done away with the polyrhythms of life, but instead has created arrhythmias," which are conflicts between multiple rhythms, and which create disrupted timescapes.<sup>30</sup>

In the coming chapters, I will explore how rewilding projects engage with and transform these polyphonic assemblages and arrhythmias, and how this influences broader temporal knowledges and narratives. Paul Huebener has beautifully written that "in a sense, time is a kind of wilderness, and we have a deep impulse to mark and domesticate time just as we do land."<sup>31</sup> What happens to time when land is re-wilded? As people are giving up habits of tailoring landscapes and ecosystems to suit their immediate interests, how are their practices of structuring time affected? How do relationships between times and land shape the futures envisioned within rewilding projects? And what ethical questions arise along the way?

## Wild(er)ness?

Prompted by Huebener, let's take a look at the concepts of "wilderness" and "wildness" before delving into the theory and practices of rewilding. In his essay "The Trouble with Wilderness," William Cronon criticizes the notion of wilderness as being a cultural construct which reinforces dichotomic thinking of humans and nature as mutually exclusive.<sup>32</sup> Wilderness, he states, is too often understood as "the last

<sup>26</sup> Bear 2016: 496. The use of the suffix "-scapes" was popularized by Arjun Appadurai (1996) through his description of multiple flows of globalization.

<sup>27</sup> Tsing 2015: 157; 23–24.

<sup>28</sup> Tsing 2015: 24.

<sup>29</sup> Tsing 2015.

<sup>30</sup> Birth 2012: 123.

<sup>31</sup> Huebener 2020: 31.

<sup>32</sup> Cronon 1996 [1995]: 19.

remaining place where civilization, that all too human disease, has not fully infected the Earth.”<sup>33</sup> In the Anthropocene, illusions of “last remaining wildernesses,” which we humans need to protect from ourselves, have gained a strong lure.<sup>34</sup>

But the problems with the concept of wilderness cannot be reduced to this somewhat misanthropic exceptionalism; rather, they need to be seen in the colonial and patriarchal contexts of its popularization.<sup>35</sup> Historically, wilderness has been used as a negative word to describe “wasted” land.<sup>36</sup> In this way, it resonates with the concept of “terra nullius” (“nobody’s land”) that was used to justify colonial expropriation of indigenous lands by framing them as “unused” (i.e. not used in accordance with Euro-Christian principles).<sup>37</sup> Such land was morally and legally claimed under the Doctrine of Discovery that granted immediate property rights to European settlers.<sup>38</sup> Through this history also developed the “sacred right to private property,” which continues to justify settlers’ ownership of colonized land today.<sup>39</sup>

With the gradual disappearance of land that could be framed as “unused,” conceptualizations of wilderness changed too. What was previously considered a morally despicable site of danger and evil was now reimagined as a sacred site of the sublime where one could encounter God.<sup>40</sup> From this reconceptualization of the environment also emerged the notion of pristine nature, unpolluted by human activity. This new wilderness can be seen as a chronotope, a narratively constructed time-space that serves as a symbolic place holder for the colonial frontier, the site where the founding myths of American democracy and national identity are situated.<sup>41</sup> Thereby, it plays an essential role in the continued performance of upper-class masculinity and patriotism. To sustain these identities, symbolic places of wilderness needed to be preserved. Creating such protected places was the personal mission of John Muir, a Scot, whose family had settled in North America in 1849 when he was a child. A writer and environmentalist, Muir was nicknamed the “Father of the National Parks” for his successful petitioning to make the Yosemite area North America’s first wildland park. His writings that perpetuated ideas of wilderness as pristine and in need of conservation travelled back to his home country, where they remain hugely influential within the conservation movement today.<sup>42</sup>

<sup>33</sup> Ibid.: 7.

<sup>34</sup> The CNN travel blog hosts a selection of “last great wildernesses” that features Scotland (Reddy 2017 for CNN Travel).

<sup>35</sup> Ward 2019. Analysing the relationship between colonialism and patriarchy, McClintock (1995) shows how colonial discourses have historically linked land to female bodies, both to be “conquered” by the white male.

<sup>36</sup> Cronon 1996 [1995]: 8.

<sup>37</sup> Donati 2019: 121.

<sup>38</sup> Miller et al. 2010: 2.

<sup>39</sup> Dunbar-Ortiz 2014: 34.

<sup>40</sup> Cronon 1996 [1995]: 12.

<sup>41</sup> Pratt 2017: G170.

<sup>42</sup> One of Scotland’s biggest and most successful environmental charities is the John Muir Trust, which has over 25,000 members.

While the existence of national parks is without doubt ecologically important, the areas chosen to be protected were in no ways uninhabited or unshaped by human activity. Where they had not already been forced off their lands beforehand, indigenous peoples were now displaced specifically for the creation of places of “wilderness,” without so much as acknowledging the role their histories and agencies have played in the formation of these very places.<sup>43</sup> After first having been deemed too “wild” and “not human enough” to be acknowledged as valid inhabitants (and owners) of their ancestral lands, indigenous peoples were now considered “not wild enough” and “too human” to be part of “wilderness.” It is only in recent years that the impact of millennia of indigenous land management is starting to be recognized publicly, as settler colonies are beginning to see the detrimental impact that forcing people from their land has had on entire landscapes.<sup>44</sup>

The issues with the concept of wilderness thus extend far beyond the dichotomic thinking that it relies on, in which wilderness, and by extension nature, is opposed to anything human. It is heavily inscribed with colonial and patriarchal ideas about the nature of humans and our relationships to land. Thereby, it “tempts one to ignore crucial differences *among* humans and the complex cultural and historical reasons why different peoples may feel very differently about the meaning of wilderness.”<sup>45</sup> In this study I aim to be attentive towards such differences, which oftentimes inform the controversies around rewilding projects.

One final point I want to add to Cronon’s critique of wilderness is the term’s temporal implication. “Wilderness” is too easily equated with “old” or even statically “timeless.”<sup>46</sup> This is reflected for instance in the idea of “primary forests,” “original” woodlands that are considered to be particularly rich in biodiversity. Of course, the trees found in these areas are by far not the first to have ever occupied their locations, but the term’s temporal grandeur lends authoritative gravity to the identified zones of ecological importance.

Given all these problems with the idea of wilderness, how can we think of the “wild” in “rewilding” more constructively? Various scholars of rewilding have drawn on the notion of “wildness” instead of wilderness.<sup>47</sup> Mark Woods defines wildness as “the autonomy of the more-than-human world where events such as animals moving about, plants growing, and rocks falling occur largely because of their own internal self-expression.”<sup>48</sup> Wildness, in other words, is not defined by the *absence* of humans but by the possibility for more-than-humans to act upon their freedom and agency. “The wild,” per Jamie Lorimer, can thus be seen as the spheres of encounter between humans and more-than-humans: “We can think of the wild as the

<sup>43</sup> Adams 2003: 34.

<sup>44</sup> For instance, Future Ecologies Podcast 2018.

<sup>45</sup> Cronon 1996 [1995]: 20 (original emphasis).

<sup>46</sup> Relatedly, indigenous communities have been constructed as intrinsically “premodern,” as truly existing only in a wild past (Fabian 1983).

<sup>47</sup> For instance Prior & Ward 2016, Prior & Brady 2017.

<sup>48</sup> Woods 2005: 177.

commons, the everyday affective site of human–nonhuman entanglement. Politics in the wild involves democratizing science, relinquishing the authority that comes with speaking for a singular Nature.<sup>49</sup> It is at these sites that rewilding projects are located.

## Rewilding

Rewilding was originally conceived as a strategy to conserve wilderness. American environmentalist Dave Foreman, founder of the radical activist network *Earth First* is often accredited with first coining the idea.<sup>50</sup> Together with conservation ecologist Reed Noss, Foreman published an article in 1991 applying the term to the then newly found *Wildlands Project*, whose aim it was to combat the extinction crisis in North America.<sup>51</sup> Noss later refined the concept further with his colleague Michael Soulé, describing it as “the scientific argument for restoring big wilderness based on the regulatory roles of large predators.”<sup>52</sup>

As Jørgensen has remarked, though, “words do not stand still.”<sup>53</sup> Today, rewilding is an umbrella term for a large range of environmental management practices and philosophies, which cannot easily be reduced to one common definition.<sup>54</sup> The term may be applied to activities as wide-ranging as abstaining from mowing a strip of lawn, to the attempted de-extinction of Woolly Mammoths.<sup>55</sup> While acknowledging the plasticity of the concept, Lorimer and colleagues describe the common denominator of rewilding projects as “a long-term aim of maintaining, or increasing, biodiversity, while reducing the impact of present and past human interventions through the restoration of species and ecological processes.”<sup>56</sup> It is this focus on ecological processes and functions that differentiates rewilding from many other conservation methods, which classically feature a more “compositional” conceptualisation, emphasising the support of individual species or the establishment of a particular kind of habitat.<sup>57</sup> Rewilding projects, furthermore, tend to be open-ended, with no set end goal or specific targets.<sup>58</sup>

The methods rewilding projects usually apply seek out ways of encouraging “native species” by mitigating the impact of “alien” or “invasive non-native species.” Larger scale projects often also try to reintroduce locally extirpated species in the

<sup>49</sup> Lorimer 2015: 11.

<sup>50</sup> Carver 2016: 2.

<sup>51</sup> Jørgensen 2015: 483.

<sup>52</sup> Quoted in Carver 2016: 2.

<sup>53</sup> Jørgensen 2015: 482.

<sup>54</sup> Lorimer et al. 2015: 40.

<sup>55</sup> The latter is the goal of a rewilding project focussed on the deep past, the Russian Pleistocene Park.

<sup>56</sup> Lorimer et al. 2015: 40.

<sup>57</sup> Lorimer 2015: 78; Wynne-Jones et al. 2020: 90.

<sup>58</sup> *Ibid.*: 95.

hope of reinstating ecosystem functions that are identified as missing, or that are currently performed through human management. The theoretical foundations of this are mainly derived from the science of ecology, from which rewilding also draws the two central concepts of “keystone species” and their “trophic cascades.” Keystone species are organisms identified as having exceptional importance for the stability of an ecosystem through their trophic cascades, the chain reactions they cause through their feeding habits.<sup>59</sup> Rewilding initiatives often focus much of their work on keystones, which enables them to evoke desired ecological developments with less direct managerial input.

The concepts of keystone species and trophic cascades can be seen at work in an example carried out at Yellowstone National Park: As America’s first official national park, it is an interesting occurrence that it should serve as the site of one of the country’s first major rewilding projects, which revolved around the reintroduction of grey wolves (*Canis lupus*). Wolves had been gradually extirpated from much of the US through intensive hunting and habitat destruction, to the extent that in 1967, they were included in the endangered species act.<sup>60</sup> When in the 1990s the final decision to return the grey wolf to Yellowstone was made, it therefore marked a historically significant event for the species. The reintroductions were extremely successful and within a few years, over a hundred wolves were living in Yellowstone.<sup>61</sup>

Part of the hope for the wolf reintroduction had been that, as a keystone species, the canines would help to suppress the numbers of herbivory elk (*Cervus elaphus*) that had skyrocketed in the decades since the disappearance of the predator. The subsequently increased grazing pressure took a toll on aspen tree populations in the area. It was hoped that wolves would end the overgrazing through their trophic cascades, both by reducing elk numbers and by changing the herbivores’ behaviour, causing them to be more alert and browse only lightly before moving on. And indeed, studies from the years following the reintroduction found that aspen trees were now regenerating more successfully.<sup>62</sup> But this is not the end of the story: some studies suggest that the impacts of the wolf reintroduction reach far beyond the elk and aspen trees. The return of the wolves, they state, has caused a domino effect triggering more and more trophic cascades, so that by now, most corners of the ecosystem are affected.<sup>63</sup> The regrown trees and scrubs, for instance, provide

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<sup>59</sup> Who counts as a “keystone” is tied to particular geographies or ecosystems rather than being an intrinsic quality of a species. Scientifically, the label is somewhat disputed nowadays, as it is considered to have encouraged simplifications of environmental processes and to have fostered research biases (Mills et al. 1993). It has furthermore been argued that charisma and taxonomic biases prevail in determining who counts as a keystone species in first place (Prior and Brady 2017; Lorimer 2007). In my use of the term, I have simply oriented myself by the ways in which my collaborators apply it.

<sup>60</sup> Mech 2012: 143.

<sup>61</sup> Ripple et al. 2001: 228.

<sup>62</sup> Ibid.: 232; Fortin et al. 2005: 1328.

<sup>63</sup> Ripple and Beschta 2012: 211.

nutrition and habitat for birds, insects, and bears, who, like wolves, prey on elk. Increased riparian vegetation offers food and shelter for beavers, whose populations have flourished. Their dam-building activities, as well as the increased presence of roots that strengthen the soil alongside the riverbanks, is even thought to have altered the course of the rivers: less erosion and the decelerated flow caused by the dams now leads rivers to meander more, creating niches and ponds for fishes, insects, and amphibia.

The idea that all this change can be attributed solely to the return of wolves is far from undisputed.<sup>64</sup> But in spite of its scientific controversies, this case study has become an iconic symbol within the rewilding movement. This was only amplified when British author and rewilding advocate George Monbiot published a video on the story in 2014. In it, Monbiot describes the trophic cascades sketched out above, confidently stating that the return of wolves to Yellowstone ultimately altered the flow of rivers.<sup>65</sup> The video took YouTube by storm and has gained over 42 million views since. The piece brought the Yellowstone wolf project to a broader audience, fuelling a growing public interest in rewilding and raising the hope that, if only we can put some key pieces back into place, “nature” will be able to “heal itself and to heal us, if we let it.”<sup>66</sup>

## Rewilding in Scotland

In Scotland, early rewilding groups (though they hardly ever used this term at the time) began appearing in the 1990s.<sup>67</sup> Early on, many British conservation workers found inspiration in international projects as well as ecological research, as for instance biologist Frans Vera’s writing on the “natural state” of ecosystems.<sup>68</sup> In Scotland, important first steps towards rewilding included the formation of the charity *Trees For Life* in 1993, the establishment of the *Alladale Wilderness Reserve* by estate owner Paul Lister, as well as various species reintroduction programs run by the Royal Society for the Protection of Birds (RSPB), the John Muir Trust, and private landowners.<sup>69</sup> Because the term did not become popularized until recently, diver-

<sup>64</sup> Researchers have pointed to other influential events that occurred around the same time, such as the end of a long drought. A control study at Yellowstone has furthermore found no evidence of behaviourally mediated trophic cascades, or other claimed links between wolves and aspen populations (Kaufmann et al. 2010: 2749–2750). Other similar experiments in different locations have brought varying results, challenging the representation of wolves as singularly achieving such major ecological shifts (Peterson et al. 2014; Winnie 2014).

<sup>65</sup> Sustainable Human on YouTube.

<sup>66</sup> A common narrative in rewilding work, here stated by Rewilding Britain (2021).

<sup>67</sup> Wynne-Jones et al. 2020: 89.

<sup>68</sup> Ibid.: 93. Whereas North American rewilding projects have historically focussed on carnivores, European projects – inspired by Vera’s work – usually centre on herbivores. Thereby, they are much easier to bring into accordance with human farming practices and to situate in the densely populated countries of Europe (Lorimer et al. 2015: 44).

<sup>69</sup> Wynne-Jones et al. 2020: 91; Monbiot 2014 [2013]: 98.

gent views exist on where, when, and how exactly rewilding began in Scotland. I have for instance been told by a member of the photography collective SCOTLAND: The Big Picture that their group was the first in Scotland to put their name to the practice of rewilding, whilst another of my interviewees, this time from a large conservation charity explained to me that their organization had really been doing rewilding for a long time, just without applying the term to their work.

Despite the hesitation to use the term rewilding, a clear paradigm shift is occurring, in which interventionist conservation methods are increasingly put into question. This is reflected in the huge success of George Monbiot's bestseller *Feral* in 2013.<sup>70</sup> Monbiot's analysis of the UK as ecologically impoverished resonates strongly with a growing public, who like him feel "ecologically bored."<sup>71</sup> Especially in Scotland, which is often thought of as a place of vast wilderness, his oppositional framing of the Highlands as "ecologically deserted" hit hard and was perceived by many as eye-opening. The book's call to rewild landscapes and communities inspired the formation of various groups and projects, including the charity *Rewilding Britain* in 2015.<sup>72</sup> A second bestselling book, *Wilding* by Isabella Tree, corroborated the public interest in rewilding in 2018, adding what is sometimes considered a more nuanced and less masculinist voice on the topic. Tree's book describes her experience of rewilding her family's estate, Knepp Castle in England, and zooms in on the detailed changes that happened on the land after ending farming practices that had been in place for generations.<sup>73</sup> Thereby, her story has the potential to be relatable to farmers, who currently are amongst the strongest opponents to rewilding in the UK.

Tree's project is furthermore an interesting example for a new format of conservation, where rewilding projects serve as private eco-enterprises. In Scotland, several rewilding projects double as ecotourism destinations.<sup>74</sup> Bamff estate, where I conducted part of my fieldwork falls into this category, others include the Alladale Wilderness Reserve, Corroul Estate, and the Glenfeshie Estate. Some of these enterprises offer high end luxury vacations to their visitors, catering to an exclusive economic elite.

In addition to such privately owned projects, much rewilding in Scotland happens through NGOs, charities, or government-led initiatives. These are usually based on collaborations between various organisation and often have the aim of connecting smaller, independent rewilded areas (organisationally, as well as physically through building corridors.) My second field site, the Cumbernauld Living Landscape (CLL) project also falls into this category.

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<sup>70</sup> Wynne-Jones et al. have termed this notable shift in public interest the "Monbiot effect" (2020: 99).

<sup>71</sup> Monbiot 2013: 7.

<sup>72</sup> Rewilding Britain 2015.

<sup>73</sup> Tree 2018.

<sup>74</sup> Wynne-Jones et al. 2020: 94.

A Scottish law that permits communities to buy land and infrastructures communally has furthermore led to the establishment of various small-scale community-owned projects, commonly small woodlands. Finally, many individuals are involved in less structured or unofficial acts of rewilding, for example un-gardening or guerrilla tree planting.

## **“I Saw Her down by the River Trying to Interview the Beavers!” – Methodology**

In hindsight, starting a fieldwork-based research project on Scottish environmentalism in autumn was probably not the brightest idea. I gathered most of my data through ethnographic fieldwork, using participatory observation and interviews. The material presented in this book is taken from fieldnotes, interviews, and recordings.<sup>75</sup>

The fieldwork – and it really was fieldwork in the most literal sense – required spending a lot of time outdoors performing a range of conservation activities, from planting trees, to taking down fences, to picking up waste. But even though the Scottish weather lived up to my worst expectations, gracing me with many grey days and wet feet, it made the experience all the more gratifying: A special bond is formed between people who spend all day working together in the mud, and the community of tough Scottish rewilders made even the dark and rainy day joyous.

In addition to interviews and participant observation, I used walking as a tool to further my understanding of my research subject. Anthropologist Jo Vergunst writes about walking that it “can exemplify [...] the engaged, close-at-hand (and foot) perceptual aspects of human relations with landscape.”<sup>76</sup> Thus encouraged, my research has been supported by extensive walks through urban parks and rural environments, either alone or with friends. Walking helped me both to think and process, but more importantly also provided me with a deeper understanding of the more-than-human worlds I move within. It adds an autoethnographic element to this thesis, as it was on walks that I most often realized how my own sensorial, emotional, and aesthetic perceptions of my surroundings changed throughout my involvement with rewilding. I also went on walks with collaborators, during which they introduced me to trees they had planted, taught me to read the weather in the white foam caps on riparian waves, and gifted me beaver chips as memorabilia to take back home.

Despite the joking comment by one of my collaborators, (and even though I would have loved to do so,) I did not actually try to interview any beavers. While anthropologists have begun to use more interdisciplinary methods for multispecies ethnography, the resources, time, and scope of this project have not allowed me to

<sup>75</sup> With the exception of few online or phone interviews due to the geographical inaccessibility of some rewilding projects, I conducted interviews in person. All ethnographic engagements firstly sought out informed consent of all participants.

<sup>76</sup> Vergunst 2013: 121.



be as methodologically experimental as I would have liked to.<sup>77</sup> Instead, I engaged with other critters predominately through listening and observing. This way, I have attempted to develop what Anna Tsing calls “arts of noticing” – an increased and multisensory awareness of more-than-human actors.<sup>78</sup>

Photography was part of my documentation and exploration of field sites. The pictures I took supplement my fieldnotes, and some are featured in this text. They furthermore served as the foundation for some creative explorations through which I have attempted to utilize artistic practice for “thinking through and against nature–culture dichotomies.”<sup>79</sup>

Finally, parts of my study include media analyses, including the use of materials derived from Facebook and several news outlets.

## Field Sites and Collaborators

Carless, city-based, and seasonally disadvantaged, establishing a “field” for my ethnographic research turned out to be tricky. Most rewilding projects are located in remote regions of Scotland that are difficult to access with public transport. NGOs with rewilding focus are generally too new or overworked to take on student researchers or interns. Eager to start my research I thus began by scouting out different environmental volunteering groups near my home in Glasgow, attended talks and events, joined community tree-planting days, and conducted some early interviews. After a couple of weeks of exploring anything vaguely rewilding related, I finally found my first main field site: the Cumbernauld Living Landscape (CLL) project, an urban rewilding project near Glasgow. A collaboration between various charities and the local government, CLL runs a small but fierce volunteer group that meets semi-weekly to perform environmental caregiving activities in and around the city of Cumbernauld. These range from picking up litter in parks to removing invasive species and planting native plants. Although urban rewilding was not initially intended to be the focus of my thesis, joining the Cumbernauld group was a rewarding decision. Working on rewilding while always being able to hear the nearest highway, and seeing the places we engaged with actively being used by humans was an incredibly interesting experience, gnawing away on my own preconceptions of “wilderness,” or where “nature” is located. I furthermore found companionship in the diverse group of people – a middle-aged ex-military man who had recently moved back home after half a life of travelling; a keen retiree who wants to stay active while also enjoying her freedom to the most; a local childcare worker with a new-found passion for environmental community work; a part-time baker and long-distance runner with a fiery rage against littering; a conservation science student building

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<sup>77</sup> See for instance Swanson 2017.

<sup>78</sup> Tsing 2015:17.

<sup>79</sup> Kirksey & Helmreich 2010: 546.

first links between theory and practice; a young guy trying to find new direction on his way through life. All shared a determination to do well for the more-than-human spaces they inhabit and worked relentlessly and in tough conditions for this sake.

While visiting Cumbernauld twice a week, I spent the remaining days keeping in touch with other projects further away and meeting up with individual rewilders. This way, I came into contact with Glasgow-based artist Beatrice Searle, who I established a strong connection with. Getting to meet another young woman with a passion for rewilding in this male-dominated movement, and with the goal of exploring its potential through intellectual and creative work proved to be deeply meaningful and inspirational.

Beatrice introduced me to my second main field site, Bamff estate in Perthshire. In many ways, this place could not be more different to Cumbernauld. An old estate, owned by the Ramsay family since the twelfth century, Bamff is miles away from the nearest village of Alyth in the Scottish eastern lowlands. After centuries of farming, the Ramsays – Paul and Louise (who both studied anthropology), their daughter Sophie and her partner Dave, as well as their young daughter Flora<sup>80</sup> – have decided to tread a new path and transform their land into an ecotourism destination. In 2002 they gained public attention through their reintroduction of beavers, which made them one of the first to bring the animals back to Scotland after centuries of extirpation. Deeply inspired by the transformation of their land the beavers caused, the Ramsays have since decided to dedicate one third of their land to rewilding. At the time of my research, they are gradually transitioning this land from conventional management practices to “Wildland,” as they call their rewilding zone.

My original plan was to visit Bamff as a live-in volunteer for a couple of weeks in March to help with a baseline survey. The survey was supposed to give the Ramsays data on soil health and biodiversity so that they can evaluate their progress later on. Because winter ended cold and late at Bamff, the Ramsays decided to postpone the survey until warmer days but invited me to come anyways. I visited them twice, once for a couple of days in early March, followed by a longer stay a week later. In total, I spent a couple of weeks at Bamff until my plans were derailed by the arrival of Covid-19.

Finally, a number of one-off events helped me better understand the relations between different forms of rewilding. I went on a walk with a guerrilla tree planter, who showed me all their young rebel trees. Conversations as well as a walk down the River Tyne with Clive, a beekeeper, gardener, and river enthusiast, taught me much about river health and local invertebrates.<sup>81</sup> A visit to Aviemore to talk to Peter Cairns, co-director of nature-photography and storytelling collective SCOTLAND: The Big Picture proved a crucial experience. Corroul Estate’s owner Lisbet Rausing

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<sup>80</sup> Paul and Louise also have three sons; the youngest, George, spent part of my visit at Bamff and we worked together closely.

<sup>81</sup> Our initial plan was to repeat these walks at times marked by different seasonal conditions, but sadly, these plans were drowned out by covid-19.

was generous to offer her time for an interview, and to share her advice and contacts with me.<sup>82</sup> At Glen Rosa on the Isle of Arran, where the ranger service is currently operating a reforestation project, I joined as a one-day volunteer and planted my first ever tree.<sup>83</sup>

Anna Tsing suggests that, rather than studying individual species, we should research landscapes and the polyphonic assemblages that make them liveable.<sup>84</sup> This multi-sited project has attempted to follow her call. Visiting a wide range of places and encountering such a diverse range of people allowed me to gain a nuanced insight into the contemporary Scottish rewilding movement, and has helped me see connectivities in seemingly contrary contexts.

## Chapter Overview

The first chapter will address the ways in which pasts come to matter in the work of my collaborators. Using Tsing and colleagues' framework of more-than-human "ghosts" I describe how in Scottish rewilding landscapes, past ecologies and extirpated more-than-human actors "linger," blurring the hard lines between past and present. By becoming sensitized to the ecological relations between different species, and to the more-than-human histories of landscapes, my collaborators have developed "arts of noticing." These permit them to perceive the traces of past beings and see how their absences shape current ecosystems. But if or how people perceive ghosts, and how this shapes their relations to landscapes can differ vastly, oftentimes leading to conflicts and misunderstandings between different stakeholders. Such conflicts are temporally informed, as divergent pasts foster contrasting values for landscapes. The final part of the chapter describes how rewilders are contesting the haunting absences that ghosts tell of by creating practices and monuments of mourning. These political acts further challenge that extirpated species belong into a linear "past" by inviting them into unknown futures.

The second chapter will explore the possibilities of wilder futures, in which humans share landscapes with all kinds of beasts. I describe the futures that my collaborators are pursuing, which are founded in an ethics of multispecies conviviality. To reach these futures, rewilders have devised specialized modes of futuring that consist of various practices of care for more-than-human beasts, and technologies that facilitate shared liveability. There are, however, costs of conviviality living. What compromises are rewilders required to make? Where do they draw their lines? I describe how my collaborators are trying to live with agentive more-than-humans that do not always behave according to their ideas. Their journeys into convivial futures

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<sup>82</sup> Unfortunately, I had to cancel my planned visit to her rewilding project due to the covid-19 pandemic.

<sup>83</sup> I had arranged to return for a few days in March to accompany the reforestation work and conduct interviews, but this plan too was hindered by covid-19.

<sup>84</sup> Tsing 2015: 157–158.

are complicated by diverse temporalities: different species, landscapes, and communities adhere to divergent temporalities, which cannot always be coordinated. Caring for beastly futures thus requires prioritisations of subjects and kinds of care.

Delving further into the impossibilities of attending to all species, the final chapter will address the interdependencies of care and control in rewilding, and the violence that occurs in its name. It will focus on the treatment of “alien” and “invasive” species, creatures, that are spatially and temporally misaligned. These categorizations, I argue, are inherently necropolitical, as their designation established who deserves to die so that others can live, and thereby becomes *killable*. I will show how rewilding’s necropolitics is temporally informed in two ways: firstly, looking at the example of deer in Scotland, I argue that their killability arises out of long histories of killing deer, that are inherently interwoven with the sovereign right to govern landscapes. Secondly, I propose that invasive species are “out of sync” – they are broken clocks. The role of the rewilders is to be a clockmaker, “repairing” environmental desynchronicities through the tools of death. These and other temporal dimensions constitute what I have called the *chrononecropolitics* of rewilding, the ways in which the organization and the power of death are temporally informed.

Unintentionally, this research has become not just a study of time but also a study of death. Time and death are tightly interwoven in my collaborators’ world-making projects, and in their relations to the more-than-human environment. By showing the many different kinds of deaths that shape rewilding, this study explores the ways in which some people are trying to “live and die well together,” and the compromises they make along the way.<sup>85</sup>

## Acknowledgements

This research would have been impossible without the support of many amazing people. Foremost, I am grateful to my collaborators, who have openly shared their thoughts with me, let me join their activities, and even invited me into their homes. It was their contagious passion for rewilding that carried me through this project.

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<sup>85</sup> Haraway 2016.

Conversations with various persons have offered important feedback, including with panellists, convenors, and attendees at conferences where I presented this project. Members of the “Conservation and/as Care Network” (particularly my close collaborators Mariana Cruz A. Lima and Ross Dalziel) inspired through thought-provoking discussions. The network’s workshop on “Temporalities of Care” reignited my creativity and enthusiasm when writing had almost become a chore.

My incredible friends have carried me through this project, I particularly am grateful to Ritti, Karen, and Geoff, who have been invaluable pillars of support. Most of all, I am eternally grateful to my family Barbara, Tim, Lotte, Seán, Elli, and Helga for being my sounding boards, my cheerleaders, and for always being there for me. This work has only been possible through your support, and I thank you for your love.





**Chapter 1 – GHOSTS  
Haunted Landscapes  
of the Necroscene**

*Figure 2: Jumping red squirrel. Photograph by author.*





## Chapter 1 – GHOSTS

### Haunted Landscapes of the Necrocene

“To track the histories that make multispecies livability possible, it is not enough to watch lively bodies. Instead, we must wander through landscapes, where assemblages of the dead gather together with the living. In their juxtaposition, we see livability anew.”  
– Elaine Gan et. Al. 2017: G5.

Each spring, a spell is cast over Glen Rosa on the Isle of Arran. It takes shape in myriads of small blue flowers that rise out of the soil in April and blanket the valley in colour for a few weeks a year. Bluebells (*Hyacinthoides non-scripta*) are typical woodland plants that grow in Scotland’s ancient forests. At Glen Rosa, however, only few trees grow: four millennia of human occupation and extensive livestock grazing have confined trees to the edge of the small river that rushes through the valley, or to the verges of the cliffs that line the steep slopes – locations, where they are “safe” from hungry deer [Figure 3].

Because of its diverse landscapes, the Isle of Arran is often referred to as a “miniature Scotland.”<sup>86</sup> And indeed, the lack of trees at Glen Rosa reflects the scarcity of woodlands across the country. Although Scotland had an estimated forestation of

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<sup>86</sup> cf. Ochyra 2019 for LoveExploring.



Figure 3: “Safe” trees at Glen Rosa (photograph by author).

60–80% around six thousand years ago, woodlands now cover only 18.5% of the country.<sup>87</sup> While this is substantially higher than its all-time low of 4% in the 1700s, it places Scottish forestation rates notably beneath the EU average of 38%.<sup>88</sup> Since the 2010s, environmental organizations, local communities, and governmental institutions have drastically increased their reforestation efforts. Within a few years, tree planting events have become so regular an occurrence that in 2019, Scotland accounted for 84% of newly planted trees in the UK.<sup>89</sup>

The Arran Ranger Service, a small team of rangers caring for the local properties of the National Trust for Scotland, are amongst those determined to raise tree numbers again. Throughout winter, they organize several tree-planting events on their site at Glen Rosa, one of which I attend in early December 2019. Our small group of volunteers hauls hundreds of native tree saplings up the hillsides of the valley, where we cut the soggy ground between the bracken with spades, and carefully place the tiny roots of the plants into the soil, before erecting plastic guards to shelter them from the jaws of hungry herbivores.

But what does this have to do with the tiny blue flower ornamenting the flanks of Glen Rosa in springtime? The Arran rangers consider the presence of the flower an indication that the area had been a woodland in the past; a thesis that the rangers tell me has been confirmed by archaeological records. In the form of the flower, ancient forests and their creatures linger at Glen Rosa, their absences made notable, *perceivable*, through the unruly presence of the bluebell. The bluebells thus carry past ecologies into the present day, drawing attention to the bygone creatures they used to live with. The flowers are *ghosts*. Elaine Gan and colleagues write

<sup>87</sup> Oosthoek 2013: 18. Brown et al. 2011: 290; Scottish Government 2019.

<sup>88</sup> Brown et al. 2011: 292; Scottish Government 2019.

<sup>89</sup> Weston 2019 for The Independent.

about ghosts that they are “the vestiges and signs of past ways of life still charged in the present.”<sup>90</sup> The ghosts at stake in this story are not the translucent spectres of ill-fated humans that might visit us on dark nights. In old Scots, they may have been called *adhantare*, “one who haunts a place.”<sup>91</sup> Ghosts such as the flowers can be thought of as “the traces of more-than-human histories through which ecologies are made and unmade:” critters, whose symbiotic partners have vanished, leaving them in a liminal state between life and death; traits developed to lure in those who are no longer; sensorial stimuli that call to attention all that is missing.<sup>92</sup> They are experienced through hauntings, “eerie presences of pasts”, “that can often be felt only indirectly.” In Scotland, where bluebells are widely known as a companion species of trees, it is easy to feel the haunting, and to notice the eerie presences of the forests that once grew at Glen Rosa.

Thinking of plants as ghosts can aid us to comprehend the ways their sociality and existence is affected by changing environments. Feminist scholar Donna Haraway tells the story of another ghostly plant: This flower, which appears in a comic strip by Randall Munroe, is an orchid (*Ophrys Apifera*<sup>93</sup>). Without its main pollinator, the orchid has been able to survive for some time, postponing its inevitable disappearance. When the orchid dies out it will take with it the last living trace of the bee. In the comic strip, one of the characters describes the story poetically: “It’s an idea of what the female bee looked like to the male bee ... as interpreted by a plant... The only memory of the bee is a painting by a dying flower.” Before walking away, one of the characters promises the flower that they will remember it and its bee once the orchid has passed.

Ghosts like the flower and its extinct bee are becoming increasingly common as the planet moves into its Sixth Mass Extinction phase.<sup>94</sup> Death (of humans and more-than-humans) plays new and uncomfortable roles in the Anthropocene, and this is deeply entangled with time, as Michelle Bastian and Thom van Dooren write:

“[...] This is a period in which relationships between life and death, creation and decay, have become uncanny; no longer entailing what was once taken for granted. Toxic legacies, mass extinction, climate change: all simultaneously remake both temporal relations and possibilities for life and death.”<sup>95</sup>

This period of uncanny death and dying has been named the *Necrocene*. The Necrocene channels attention to the exorbitant amount of death imposed onto the world. This mass dying is conspicuously *untimely*, shaped by relations of power and ineq-

<sup>90</sup> Gan et al. 2017: G1.

<sup>91</sup> Thomson 2019: 10. Adhantare are contrasted against other, more anthropomorphic ghosts such as the *bar-ghaist*, “a ghost all in white, with large saucer eyes, appearing near gates or stiles” (Ibid.: 13).

<sup>92</sup> Gan et al. 2017: G1.

<sup>93</sup> Haraway 2017: M33.

<sup>94</sup> Rose et al. 2017.

<sup>95</sup> Bastian & van Dooren 2017: 2.

uity. Oriol Batalla argues that “the modification of time by the logic of 24/7 Capitalism has disrupted the temporalities of the world-ecology, modifying the shifts of both labor and ecosystems as the Necrocene has viscously infected and extinguished the natural circadian rhythms through its deathly logic.”<sup>96</sup> Anthropomorphic trouble has broken more-than-human times, and death is seeping in through the cracks. It is these ill-timed deaths that bring to the fore ghosts – the residents of the Necrocene’s deathscapes.

The disturbed time of death makes it particularly important to attend to ghost stories. Like the orchid and the bee, the ghosts appearing in this chapter serve as a poetic reminder of the ones that have been lost throughout Scotland’s more-than-human histories. Learning about these ghosts does not only teach us about environmental pasts; it is also quintessential to understand how death and absences shape current and future biosocial conditions:

“The urgency to act in the face of the ruins that characterize our Anthropocene condition should not [...] invite us to turn our backs to the past in order to take a different path towards the future. Instead, we must look back in order to denaturalize the state of our ruins, understand how they have come to be, and think of how abundance (in terms of multiplicity of life forms and ways of living together) can become again part of our future realities.”<sup>97</sup>

This chapter will study these ruins by exploring how past ecosystems and the multispecies agents that constitute them regain significance in rewilding projects. In that sense, it may be thought of as an *ecohauntology*, an ethnographic exploration of landscapes of hauntedness, “spectrally resonant spaces” that are “empty *in a particular way*,” marked by liminal agents, neither fully here nor entirely gone.<sup>98</sup>

First, I will elaborate on the importance rewilders give to environmental pasts as tools to work against the “shifting baseline syndrome” that tints many people’s perceptions of the environment. Ghosts offer a path past this ecological forgetting by drawing attention to the ways in which landscapes are constituted by past and present creatures. That is, they render the landscape readable as a “taskscape,” the always becoming accumulation of human and more-than-human biosocial acts of dwelling.<sup>99</sup> Before discussing in greater detail how my collaborators perceive ghosts, I describe how, through rewilding, they have cultivated “arts of noticing.”<sup>100</sup> By being attentive not only to presences but also to *absences*, these arts stretch beyond the confines of a current moment, drawing in beings from various pasts. Yet, as multiple pasts lay “through” each other in landscapes, ghosts can also bring confusions and conflicts.<sup>101</sup> What, if not everyone perceives the same ghosts? Ghosts, I describe, can

<sup>96</sup> Batalla 2021: 129.

<sup>97</sup> Manzi 2020: 29.

<sup>98</sup> Henriksen 2021; Armstrong 2010: 243; Mathews 2017: G145 (original emphasis).

<sup>99</sup> Ingold 2000 [1993].

<sup>100</sup> Tsing 2015: 17.

<sup>101</sup> Mathews (2018) uses the term “Throughscapes,” which will recur later in this chapter.

cause perceptive and aesthetic conflicts between individual stakeholders, which are central to some of the discordances that surround rewilding work. The final section of this chapter engages with the sensation of grief and loss that many rewilders experience as a reaction to their encounters with ghosts, and the acts of mourning that they performed in response. These acts serve as expressions of multispecies solidarity, and as political commentaries on contemporary lifeways in the Necrocene.

## Forgotten Landscapes

Scotland has cultivated the image of being one of Europe's last corners of "wilderness," a place of rough beauty and mystical adventure.<sup>102</sup> The Scottish Highlands, a sparsely populated, mountainous area in the northwest of the country, are commonly considered to be the centre of this wild(er)ness, as is aptly captured in the title of a BBC nature program called "Highlands - Scotland's Wild Heart." The framing of Scottish landscapes as wild and pristine is a lucrative business, with nature-based tourism bringing an annual £1.4 billion to the economy and securing 39,000 full-time jobs.<sup>103</sup>

Criticising representations of Scotland as a wild haven and heaven, rewilding activists have begun to challenge prevalent pristine nature epistemes. Rather than being a last resort of wilderness, they argue, Scotland is in fact a shadow of its past vitality. According to George Monbiot, this is going widely unnoticed because Brits are suffering from the "shifting baseline syndrome," through which standards of perceived environmental health and abundance deteriorate over time.<sup>104</sup> For each generation, the state of the environment – the numbers and varieties of animals, the quality of air and water, etc. – that they experienced during their youth has set the parameters of an unconscious baseline, from which people derive their conceptions of healthy environments.<sup>105</sup> This has the effect that people "do not perceive the ecological decline because their ideas about nature change together with the deterioration of nature."<sup>106</sup> One of my collaborators critically reflects on the practical impacts of this:

Interview with Beatrice, 28.02.2020

"I think another really practical problem with returning to past ecosystems, apart from the fact that we've now changed the landscape so extremely that it might not even be possible, is that we don't even know what belonged where really, you know, to any, any detailed extent because of this phenomenon of

<sup>102</sup> Many adventure travel pages feature Scotland on their lists of "wild places" (e.g. Andia 2017 for Culture Trip).

<sup>103</sup> Scottish Natural Heritage 2010: i.

<sup>104</sup> Monbiot 2014 [2013]: 69.

<sup>105</sup> Alagona et al. 2012.

<sup>106</sup> Drenthen 2009: 295 (citing Vera 2006).

shifting baseline syndrome and the generation that comes after always kind of ascribing to what's current. So, you know, this particular bird needs this habitat and, and perhaps that particular bird is just making do with that habitat but, you know, go back to the generation before where there was more of this other thing, that would be that preferred place. So, I think maybe knowledge loss is, you know, really a practical problem as well."

The shifting baseline syndrome, as she describes it, can be viewed as a form of forgetting, a symptom of losing knowledge of more-than-humans. As a practical problem, this knowledge loss has tangible consequences on how people engage with and care for their environments.

Another point that my interviewee mentions similarly relates to the role of the past in rewilding. The word "rewilding" is heavily inscribed with temporal implications that evoke past environments. Its prefix "re" – which is source of some controversy – implies a form of return, often thought of as meaning a return to a past state of the "wild."<sup>107</sup> However, my collaborators agree that there is no point in trying to turn back the clock or to "return to the past." Louise from the Bamff rewilding project explains to me that "it's not about returning to some static point in history, but about returning to a functioning system that is always changing."<sup>108</sup> For this reason, she prefers the term "wilding" over "rewilding," though this is yet to catch on.

Yet, none of this should suggest that pasts don't matter to my collaborators. In the contrary – though they are not trying to emulate a particular historical ecosystem, environmental histories offer insights into what makes dynamic ecosystems "function." They provide *temporal reference points* that serve as alternative baselines for biodiversity goals.<sup>109</sup> And here, ghosts can lead the way: Ghosts disrupt the suffocating de-historicization of the environment induced by the shifting baseline syndrome, bursting the narrow frames imposed by a singular present:

"Admiring one landscape and its biological entanglements often entails forgetting many others. Forgetting, in itself remakes landscapes, as we privilege some assemblages over others. Yet ghosts remind us. Ghosts point to forgetting, showing us how living landscapes are imbued with earlier tracks and traces."<sup>110</sup>

Thinking with ghosts can highlight how ecosystems are temporally entangled across many pasts, presents, and futures, reminding us that other species are historical actors too.<sup>111</sup> Ghosts make it possible to pick up the threads of individual stories and learn of the ways in which pasts linger and absences matter.

<sup>107</sup> Jørgensen 2015.

<sup>108</sup> Fieldnotes, 10.03.2020.

<sup>109</sup> Lorimer et al. 2015: 46. Though some rewilding initiatives choose particular historical epochs as ecological benchmarks, this is not the case at Bamff or CLL.

<sup>110</sup> Gan et al. 2017: G6.

<sup>111</sup> Tsing 2015: 168.

## Adhantare: Ghosts of the Taskscape

Who is it, then, who haunts Scottish rewilding landscapes? The ghosts that receive the most attention from rewilders are “missing keystones”; species, who have historically held crucial roles in ecosystems that are now unfilled.<sup>112</sup> Their absences are particularly notable – they have left traces big and recent enough to be perceivable to knowledgeable human senses.

A particularly controversial missing keystone in Scotland is the grey wolf (*Canis lupus*), a long-time companion species of humans.<sup>113</sup> Wolves are the subject of conflicting cultural narratives: they have been demonized and romanticized, described as brave, cruel, noble, and perverted.<sup>114</sup> But a prevailing feature is that they are commonly considered to be quintessentially *wild*. Perhaps unsurprisingly, wolves are central to Scottish rewilding discourses.

Although wolves have returned to most of Northern Europe over the last decades after having been widely extirpated in past centuries, now resettling even in densely populated countries such as the Netherlands, the insular geography of the UK has prevented them from migrating here without human support.<sup>115</sup> Paul Lister, a retired millionaire who is rewilding the Alladale Estate in the North of Scotland has made it his mission to bring wolves back. Since the 2010s, he has been petitioning for the permission to release a pack of wolves into a fenced-off area.<sup>116</sup> His thus far unsuccessful efforts have received mixed reactions: Many rewilders enthusiastically pick up his plea, whilst farming communities tend to oppose his plans. In Scotland, sheep are usually left to roam relatively freely on the open hills, and fences are uncommon. The presence of wolves would likely necessitate fundamental changes in farming practices – a cost, few farmers are willing to consider. And why should they?

The story of wolves, as rewilders tell it, usually begins with their disappearance from Scotland. Once common here, wolves were driven to local extinction centuries ago because of the perceived threat they posed to humans and livestock.<sup>117</sup> This fear is encapsulated vividly in an old Gaelic poem, translated by Alexander Carmichael:

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<sup>112</sup> Calling these “ghosts” is my analytical framing rather than terminology Scottish rewilders use themselves, with few exceptions such as in the video “Ghosts of the forest” (Alladale 2021).

<sup>113</sup> Haraway 2016 [2003]: 120.

<sup>114</sup> Fenske and Tschofen 2020.

<sup>115</sup> Bullock 2019 BBC News. A recent volume by Michaela Fenske and Bernhard Tschofen (eds.) from 2020 studies the reestablishment of wolves across Europe as part of a broader “return of the wild,” that acts as “a catalyst for fundamental socio-biological changes of the world within human societies” (2020: 4). Rewilders in Scotland commonly contemplate the return of the wild and of wolves to be closely correlated, albeit a development that is still outstanding - largely, because the socio-biological changes it would catalyse are considered undesirable by many. While wolves are particularly powerful signifiers of the wild, many other returns have occurred in Scotland, and the changes this is causing surface throughout this study (see for instance chapter 2).

<sup>116</sup> Miller 2013 for BBC News.

<sup>117</sup> Wiseman 2012: 29.

Lift our flocks to the hills.  
 Quell the wolf and the fox,  
 Ward from us spectre, giant, fury,  
 And oppression.<sup>118</sup>

Because of this hostile sentiment towards wolves, their hunting was greatly encouraged and occasionally even financially rewarded. In the attempt to eradicate the canines, it furthermore became a common practice in the 16<sup>th</sup> century to burn down entire tracts of forests that were home to wolves. These concentrated efforts proved successful and Scottish wolf populations began to dwindle. As a result, it became increasingly common in the 17<sup>th</sup> century that hunters claimed to have killed the “last Scottish wolf.”<sup>119</sup> The last official account of a wolf cull dates back to 1680, though alleged shootings and sightings continued until the 19<sup>th</sup> century.<sup>120</sup>

Scotland is not unique in this history: Across Europe and its colonies wolves were thought of as threats and competitors. A notable intervention to this conception was made by American philosopher Aldo Leopold (1887–1948). In his piece *Thinking Like A Mountain*, he describes his experience when, upon shooting a wolf, he became witness to “a fierce green fire dying in her eyes:” “I thought that because fewer wolves meant more deer, that no wolves would mean hunters’ paradise. But after seeing the green fire die, I sensed that neither the wolf nor the mountain agreed with such a view.”<sup>121</sup> Leopold elaborates how in the decades after this transformative moment, he noticed hillsides changing: after wolves had become locally extirpated, deer numbers increased, which led to intense overgrazing of the vegetation and heavy damage to mountain ecosystems.

Wolves, in Leopold’s writing, are not just dangerous killers but sentient beings who contest their own deaths. They are part of an environmental community that changes without them – for the worse. This reflects how some of my collaborators think about Scottish wolves.<sup>122</sup> Artist Beatrice Searle, for instance, describes in her 2019 documentary how without wolves as predators, Scottish ecosystems have deteriorated:

“The loss of wolves in Scotland began crippling ecological decline. Deer numbers exploded, they grazed the seedlings and the saplings down to nothing, depleted the soil through erosion, and increased nitrogen, and dramatically impacted the species of plants that could grow in the Highlands.”<sup>123</sup>

<sup>118</sup> Quoted in Wiseman 2012: 28.

<sup>119</sup> Crumley 2010.

<sup>120</sup> Weymouth 2014 for *The Guardian*.

<sup>121</sup> Leopold 1988[1949]: 2.

<sup>122</sup> The online network of SCOTLAND: The Big Picture (2020) is even named “Think Like A Mountain.”

<sup>123</sup> Beatrice Searle 2019 on YouTube (04:14).



According to this narrative, contemporary Scottish landscapes are severely shaped by the loss of wolves. Just like the blue shimmer blooming on Arran in spring evokes the forest that once covered Glen Rosa, the prevalence of herbivores and the lack of plant diversity amplify the gaping chasms that the eradication of wolves has left in ecological communities.<sup>124</sup> The understanding of wolves, and of the environment more generally, within this narrative recognises other species as invested with agency. Thereby, it aligns with the theoretical conceptions of multispecies scholarship, which has challenged rigid modernist categories of nature, human, individual, and species, reconceptualizing living beings not as fixed units but as “bi-social becoming:” always-emergent beings that are shaped by processes of transspecies interactions, and that are actively involved in the becoming of environments.<sup>125</sup> Agency here is not defined by the act of intentional decision making but instead lies in the capacity to influence surrounding environments through affording particular kinds of interactions and engagements. In rewilding, similarly, more-than-humans are treated as “actants” connected in relational networks of affect.<sup>126</sup> Predators hunting, herbivores grazing, fungi breaking down minerals: all these can be considered agentic actions that shape and make worlds. Environmental histories like the story of the Scottish wolves show how such actions impact other species, and the environment more broadly.

It is the sum of agentic, more-than-human actions that constitute the “functioning systems” (as Louise called it) that my collaborators are hoping to facilitate. In that sense, rewilding landscapes resemble what Tim Ingold has called the “taskscape:” First coined in the 1990s, the concept of the taskscape contested contemporary notions of the landscape as either a static, material backdrop to the unfolding of social life, or as a cultural construct. Rather, Ingold sees landscapes as the accumulation of acts of dwelling through which human and more-than-human agents make their lives over time.<sup>127</sup> In Ingold’s understanding, all beings exist in webs of relations, which are enacted through everyday activities (“tasks”), and whose material impacts constitute the landscape: “*the landscape as a whole must [...] be under-*

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<sup>124</sup> Arguably, many other aspects factor into the production of these landscapes, for instance the extensive sheep grazing practiced across Scotland. In chapter 3, I argue that there are further historical occurrences that caused deer populations to grow and forests to shrink, coproducing the environmental transformations that are, perhaps sometimes disproportionately, ascribed to wolves. The extinction of wolves is woven in to these histories, rather than being an independent event. Yet, this does not mean that their ghostliness is any less prevalent: on the contrary, analysing its socio-political contexts further denaturalizes the extinction of wolves. Although the traces that mark the absence of wolves can also be read as traces of other historical processes, this only emphasizes the extent to which environmental and social dynamics are entangled in the making of biosocial worlds.

<sup>125</sup> Kirksey & Helmreich 2010: 552; Ibid. citing Haraway (1997), 2010: 556.; Ingold (2013: 9). Ingold has proposed the term “biosocial becomings” to further challenge perceived divisions between biological and social spheres, arguing that they are, in fact, inseparable.

<sup>126</sup> Latour 2005.

<sup>127</sup> Ingold 2000[1993]: 190.

*stood as the taskscape in its embodied form*: a pattern of activities “collapsed” into an array of features.<sup>128</sup> These activities – or tasks – can be understood as “any practical operation, carried out by a skilled agent in an environment, as part of his or her normal business of life.”<sup>129</sup> Pursuing tasks is how we live our lives, and this is true for other species: beavers’ dam building activities, for instance, can be thought of as tasks because they constitute their daily business of attending to their shelter, storing food, and maintaining zones of deep water that protected them from predators. Simultaneously, they impact the surrounding environment by altering the pathways of rivers, creating wetlands, and providing opportunities for other critters to cross the water.<sup>130</sup>

Ingold contests the idea that dwelling activities are inscribed into the landscape, as if it were a passive medium. Instead, “histories are woven, along with the lifecycles of plants and animals, into the texture of the surface itself.”<sup>131</sup> The taskscape thus manifests the temporalities of the landscape; within it, “the present is not marked off from a past that it has replaced or a future that will, in turn, replace it; it rather gathers the past and future into itself, like refractions in a crystal ball.”<sup>132</sup>

Ingold later on remarked that, with the theoretical developments of the landscape within anthropology, the concept of the taskscape has become obsolete.<sup>133</sup> Nonetheless, I find it holds interesting analytical potential as it draws attention to the importance of custodian activities, and because the taskscape cannot be flattened to linear notions of past, present, and future. However, what it does not address is the potentiality of uneven or discordant relationships between tasks, or between those carrying them out. Rewilding initiatives do not treat all tasks equally: rather, it is the tasking of keystones that carries the greatest importance for the environment. Others, so-called invasive alien species, perform tasks that are by definition undesirable.<sup>134</sup> The rewilding taskscape contains hierarchies and unequal power relations. Ingold has been criticized for making his taskscape too harmonious, painting a picture of diverse beings “resonating” with each other in their dwelling activities, whilst paying little attention to the ethical and political frictions that might occur when multiple tasks or temporalities collide.<sup>135</sup> Ghosts offer a potential response to

<sup>128</sup> Ibid.: 198 (Original emphasis). This concurs with Tsing’s understanding of landscapes as products of “the overlapping world-making activities of many agents, human and not” (Tsing 2015: 152).

<sup>129</sup> Ingold 2000[1993]: 189.

<sup>130</sup> It is even speculated that early humans have crossed wetlands using beaver dams as walkways (Brazier et al. 2020: e1494). A beautiful video of wildlife cam footage showing all kinds of critters crossing over a beaver dam at Voyageur National Park can be seen on the park’s Facebook page (Voyageurs Wolf Project 2019).

<sup>131</sup> Ingold 2000[1993]: 198.

<sup>132</sup> Ibid.: 196.

<sup>133</sup> Cited in Gruppuso and Whitehouse 2020: 591; see for instance Olwig (1996) on landscapes as built and emergent.

<sup>134</sup> See chapter 3.

<sup>135</sup> Ingold 2020: 586; Gruppuso and Whitehouse 2020: 591–2.

some of these shortcomings: Like the taskscape, ghosts blur the temporal division of past and present, showing how more-than-human relations and interactions are entangled with landscapes. But where the taskscape, perhaps rather neutrally, sees beings and activities as being “incorporated” into the landscape, ghosts are attentive to ongoing relations, or the lack thereof.<sup>136</sup> Ghosts are witness to those relations that have ended prematurely: tasks that go without a called-for response, or that will soon no longer be possible. Ghosts retain their agency beyond the scope of their lifetime, as they continue to inspire action.

But how do people come to know these stories in first place? The following sections will address how rewilding shapes the ways in which my collaborators perceive landscapes, and what it means to learn to observe ghosts in the taskscape.

## Sensing Presences

On my first day with the CLL volunteers, the trainee Graeme takes us on a forest adventure:

Fieldnotes  
Cumbernauld, 04/12/19

*When we're finished with our lunch, Graeme offers to show us a badger (Meles meles) den nearby. All the volunteers eagerly agree and follow him into the woods, but not before he makes us promise not to disclose the den's location to anyone. Badgers are unpopular with many farmers because they are thought to transmit diseases such as bovine tuberculosis to cattle. Also, as I learned today, an old British blood sport called “badger baiting,” wherein badgers are set to fight against hunting dogs is still practiced clandestinely in Scotland. For the badgers' safety, the location of their den must stay a secret.*

*On the way through the forest he points out all sorts of badger traces, paying attention to the smallest details: For instance, as we're climbing over a mossy tree trunk, he shows us a small patch where the moss has been rubbed down by the badgers' bellies as they clamber over the tree [Figure 4]. Deer or foxes don't leave such marks, as they can simply jump over the trunk. We also find plenty of “nuzzle-marks,” where the badgers have dug their snouts into the soil to search for bugs. Sometimes you can even see the two wee dots of their nostrils in these traces.*

*While following the tracks, we also watch out for trail cameras. If we ever find one that isn't marked as belonging to an environmental group, Graeme urges us, we should contact Scottish Badgers or another wildlife protection group. The cameras might have been put up by antagonistic persons who want to capture or harm the badgers.*

<sup>136</sup> Ingold 2000 [1993]:193.; Gan et al. 2017.



Figure 4: Badger traces on mossy tree trunk (photograph by author).

*After following the badgers' path for a while, meandering through the woods and down a steep slope, we finally find the den – a true castle! The hillside is spiked with dozens of entrances that appear nearly all the way down to the foot of the slope. The entrances lead to several chambers inside the hill, which are likely to house several generations of one badger family. As we slowly walk down, we admire the badgers' architectural skills. Graeme has endless stories about badgers, which he tells us with fervent excitement. For instance, that badgers have latrines: They dig ditches somewhere not too far from their den and that's where members of the cete will go to defecate. We find a latrine at the bottom of the hill, not far from the lowest entrance. Graeme makes us all smell and analyse the faeces (he says they smell unusually "sweet," though this means nothing to my uneducated nose).*

*On the way back to our lunch site, Graeme continues to find bits of faeces. To me, most of them look just like ordinary pieces of dirt on a first glance. He finds faeces of a Bussard or owl, and what he believes to be pine marten excrement, conveniently deposited on a leaf, which he takes back to our lunch spot to show to Scott, the group leader. There, Graeme picks apart the faeces, investigating the animal's diet by looking at their colour, consistency, remains of seeds and bones, etc. Apparently, if the faeces are shaped like a swirl, they're likely to be from a carnivore. Little glittery bits indicate the consumption of shelled invertebrates, and a purple tinge hints at a berry-heavy diet. Graeme's eagerness to learn about the lives of these animals appears to know no boundaries, and nobody seems to be too irritated by his methods of analysis."*

A walk like this is an intensely multi-sensorial experience: listening for birds, smelling badger faeces, looking for any readable trace. Through these activities, we come to know the elusive, nocturnal badgers of Cumbernauld. Following their traces

makes it possible to engage with a species that we would otherwise rarely encounter, if ever at all. For the remainder of the day, we carry weird looking lumps of dirt to Graeme, hoping for another glimpse into the life of a forest creature. His guidance constitutes a form of storytelling, which helps us transcend the narrow frameworks of our anthropocentric perceptions:

“Telling a story [...] is not like unfurling a tapestry to *cover up* the world, it is rather a way of guiding the attention of listeners or readers *into* it. A person who can ‘tell’ is one who is perceptually attuned to picking up information in the environment that others, less skilled in the tasks of perception, might miss, and the teller, in rendering his knowledge explicit, conducts the attention of his audience along the same paths as his own.”<sup>137</sup>

The forest walk thus offers far more than simply an inspiring experience – by “rendering his knowledge explicit,” Graeme presents the volunteers with concrete steps to engage more deeply with the landscape: inspect the ground we are walking on and look out for marks and unfamiliar shapes; explore smells, textures, colours; take things apart and study their components. These activities become an integral part of the volunteer sessions, where we try to spot details in the landscape that we can analyse collectively. Planting trees on cold winter days, we trace the tunnels that moles and mice have dug underneath the carpets of yellow-brown grass. Removing spruce trees, we gather around a tree trunk that a squirrel has used as its dining table, discussing whether the gnawing marks on the leftover pinecones can tell us whether the squirrel was left- or right-handed. Picking through the forest on an especially cold day, we find a large piece of plastic wrapping inside the faeces of a pine marten, who had not been able to tell apart food from waste humans left in the forest. By being shown the marks more-than-human tasking leaves behind, the volunteers and I have learned to see the landscape as *storied* by more-than-humans.<sup>138</sup> We are becoming aware of the landscape as invested with the mundane, everyday activities of other creatures. Thereby, we come to *read* the landscape more deeply. This constitutes what Anna Tsing calls “arts of noticing:” Tsing argues that in order to know the consequences that environmental change has on more-than-human lives, we must cultivate skills that help us look beyond the brittle domains of our species.<sup>139</sup> She exemplifies these arts of noticing through her experience of coming to know wild mushrooms through smelling, and through finding the traces of their multi-species engagements.<sup>140</sup> From an international community of mushroom gatherers, she learns to identify scrapes, lumps, and even trash as possible indicators of mushrooms. Her arts of noticing are at the core constituted by the development of a set of skills that is attentive towards the vitality of, and relations between other species.

<sup>137</sup> Ingold 2000[1993]: 190. Original emphasis.

<sup>138</sup> Van Dooren and Rose 2012.

<sup>139</sup> Tsing 2015:17.

<sup>140</sup> Tsing 2015:45.

Like Tsing, my collaborators have learned to sharpen their senses to the stories that make up places. The process of relearning how to perceive landscapes can be thought of as a *conditioning of the senses*, employing what Foucault calls “technologies of the self” that “permit individuals to effect by their own means or with the help of others a certain number of operations on their own bodies and semis, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality.”<sup>141</sup> Technologies of the self are methods of self-transformation, through which one disciplines oneself to reach a more desirable state of being. This self-transformative ambition describes what rewilders sometimes refer to as “rewilding the self”; the attempt to free oneself from the governance of a techno-capitalist society and become more attuned to “wild” environments.<sup>142</sup> In the case of my collaborators, this transformation consists of training their sensory capabilities, thereby learning to perceive more-than-human tasks in the landscape. By seeking out those transformations, they – and myself – are reshaping their selves and their possibilities of relating to their more-than-human environments.

Tsing’s arts of noticing are valuable tools to learn about presences that easily evade our senses. However, through rewilding my collaborators have not only become more perceptible to these presences, but also to *absences*.

### Noticing Absences

Beatrice is a Welsh stonemason and artist, who, when we first meet, is still new to Glasgow. I found her contact through an artistic-academic exhibition she co-organized in London, titled “Rewild/Rewind.” When we meet up for coffee, Beatrice and I immediately get along well. She tells me that her interest in rewilding was first sparked by George Monbiot’s book *Feral*, a “catalyst book” that has led her to the questions that inspire her work and activism today.

It was around the time she read *Feral* that Beatrice moved to Scotland, and it was here that she had an experience that profoundly changed how she perceives the environment. As a stonemason, Beatrice has a deep connection to rock. In the past, she has felt drawn to the landscapes of the Highlands, which are dotted with areas of rock bursting through the vegetation. Moving through the rocky environment offered a beautiful way for Beatrice to connect with her medium. This changed one day during a hike in the Highlands:

Interview, 28.02.2020

“The more I read about ecological breakdown in the world, the more I started to see things, and question what it was that I was seeing. [...] I had this

<sup>141</sup> Foucault 1988: 18.

<sup>142</sup> For instance, Jesse Wolf Hardin on the *For the Wild* podcast (2020). My collaborators did not use this term in our conversations.

really unpleasant lightbulb moment as we're walking in the Cairngorms. And I suddenly realized that there was [...] nothing living around me. And that the bare rock, which, at one time I'd thought was so extraordinary, was not enough to sustain me – not enough to sustain anything.”

Beatrice goes on to describe being overcome by anxiety in the middle of her walk. The rocky landscape she had felt so connect to suddenly changed its significance: Reading about the variety of creatures that had once populated the Highlands changed her understanding of who and what *belonged* here, and made her see that she had been suffering from the shifting baseline syndrome. Realizing the absence of past lifeforms, the landscape suddenly appeared empty. Rather than being a beautiful sight to behold, the landscape became a space devoid of living – that is, of dwelling. If, as Ingold suggests, the “landscape is constituted as an enduring record of – and testimony to – the lives and works of past generations who have dwelt within it, and in so doing, have left there something of themselves,” then Beatrice has become able to recognize this record, and thereby has become aware of the dwindling out of many of its melodies and rhythms.<sup>143</sup>

What Beatrice perceives is comparable to Justin Armstrong’s “ghost texts,” “the accumulated cultural resonance of human presence in spaces or objects that inhabit specific cultural locations and temporalities.”<sup>144</sup> Though Armstrong writes about *human* presences, in the taskscape this needs to be extended to include more-than-humans. Beatrice knows of the abundance of creatures that have historically dwelled here, and so the barren rock of the Highlands constitutes a ghost text because it signifies the discontinuity of those pasts. This story is quintessentially hauntological, as the rock tells the story of futures that never came.<sup>145</sup> In this ghostly encounter, her senses are quite literally “extend[ed] beyond their comfort zones,” transgressing the boundaries between past, present, and future.<sup>146</sup>

Beatrice is not the only one who views the Highland landscape as lacking liveliness. A member of the Facebook group “Rewilding Scotland” writes for instance:

<sup>143</sup> Ingold 2000[1993]: 189. Ingold might argue that the taskscape Beatrice moved through is nonetheless lively, albeit dominated by temporal rhythms that are too slow for our fleeting senses to witness (2000[1993]: 201). If we could watch the landscape at an accelerated speed, we would find that rock and other entities that are often considered to be “lifeless” are moving just like animals. There is an argument to be made here on the vitality of such entities, and what can be gained if we extend our notion of agency to include those commonly perceived as inanimate (see e.g. Bennett 2009). But perhaps this misses the point in this case: It is not just the presence of *any* sort of vitality that matters. Rather, rewilders like Beatrice care about the survival of *specific* lifeforms and landscapes, and the abundance of diverse actants.

<sup>144</sup> Armstrong 2010: 246.

<sup>145</sup> Fisher 2014: 59, citing Derrida.

<sup>146</sup> Gan et al. 2017: G2. Unlike the bluebells from the beginning of the chapter, her Beatrice’s noticing does not follow one specific relation that points towards the absence of one particular species. Rather, it is the overall lack of liveliness that haunts her.

“The northwest Highlands are rugged and breathtakingly beautiful. But they are massively impoverished from an ecological perspective. Hidden away across these big open landscapes are small, scattered fragments of temperate rainforest found clinging to coastal sites and steep-sided ravines. I can’t help but envisage this landscape cloaked in oak, hazel, willow, holly, pine and birch. Nice bone structure, but this could be so much more [...]”<sup>147</sup>

The knowledge of other possibilities for the landscape leads both Beatrice and the Facebook user to imagine what those could look, feel, sound, like. By conditioning the rewilders’ gaze, the ghosts of Scotland’s Highlands make themselves perceivable and stimulate the imaginative mind. Ghosts are thus closely tied up with imagination:

Interview with Beatrice, 28.02.2020

“I think imagination is so important in rewilding. I think the only certainty in what you could imagine, in what a person could and should imagine, is that it’s always changing, if you know what I mean. So like, the only certainty is that it will never be certain what it is. Also, because of that shifting baseline syndrome thing that we’ve touched on. If you don’t imagine, if you don’t have imagination, you can’t, you know, begin to understand what we might be trying to achieve. You know, if you can’t imagine what’s been lost, if people don’t talk, if people don’t tell stories, people don’t hope. Because I think imagination is all bound up in hope [...] So, yeah, it’s like imagination HQ. Looking back, looking back, imagining back and imagining forward.”

In this, Beatrice does not consider imagination as a merely act of fantasizing but as a necessary way of knowing pasts and devising healthier futures. Ingold similarly suggests that “to imagine [...] is not so much to conjure up images of a reality “out there”, whether virtual or actual, true or false, as to participate from within, through perception and action, in the very becoming of things.”<sup>148</sup> Imagination, then, is a way of being creatively entangled with a constantly emergent world, shaping it and being shaped, being alive in it and to it. This also means that ghosts are not merely rhetorical figures that help us understand the more-than-human histories of landscapes: by rendering absences perceivable, ghosts enable those who notice them to imagine other landscapes. These imaginations in turn are affective, as they motivate rewilders to pursue more ambitious visions of wild futures, thus working against the de-historicizing shifting of baselines.

Gan and colleagues write that “anthropogenic landscapes are also haunted by imagined futures. We are willing to turn things into rubble, destroy atmospheres, sell out companion species in exchange for dreamworlds of progress.”<sup>149</sup> This grim

<sup>147</sup> Public post on Facebook (2021).

<sup>148</sup> Ingold 2012: 3.

<sup>149</sup> Gan et al. 2017: G2.



prognosis can be turned around too: As Beatrice pointed out, imagination can be bound up with hope. Just like capitalist dreamworlds, imagined futures that seek out possibilities of multispecies liveability can also shape the ways in which we make our lives within the taskscape.

### Clashing Perceptions

But what happens when the perceptions and imagination of different stakeholders don't align with each other? When people don't agree "whose stories come to matter" in the emergence of landscapes?<sup>150</sup> What happens, when people don't see the same ghosts?

The statements by Beatrice and the Facebook user show that when landscapes become filled with ghosts, perceptions of aesthetic qualities change. The Facebook user writes that, while the Highlands are beautiful, their aesthetic appeal is spoiled by absences. Similarly, Beatrice explains that the Highlands lost their aesthetic appeal to her when their rock became a visual reminder of the local lack of life. Ghosts set aesthetic reference points that are not necessarily shared within a community, or that are accessible to everyone equally. At Glen Rosa, this has led to a local conflict: some of the villagers are unhappy about the rangers' plan to reforest the valley. If the hills will be covered in trees, they lament, the views will be spoilt.<sup>151</sup> This is not only a problem of beauty: the view of the Glen connects them to their ancestors who gazed upon the same, unchanged hillsides for generations. The perception of the landscape herein implied carries a sense of timelessness, which links families beyond life. By reforesting the valley, locals will lose sight of their own ghosts: the rocks and land formations through which they connect to their histories.

Andrew Mathews uses the term "throughscapes" to describe how landscapes can be imbued with various patterns that are interrelated but have distinctive histories, temporalities, and organizations.<sup>152</sup> These throughscapes "overlap and lie through each other; they organize perception and anchor histories."<sup>153</sup> At Glen Rosa, rewilders' and local villagers' perceptions of the landscape follow divergent temporalities, and although they are interlinked, this causes widely different ideas of what a desirable landscape looks like.<sup>154</sup> The transformations that the rewilders are initiating disrupt the temporalities of the throughscapes that signify familial ties to local villagers, and thereby risk making the landscape illegible to them. Martin Drenthen describes a similar issue that occurs with river reformation projects in the Netherlands, which, critics say, "endanger the old legible cultural landscape, and thus undermine the experience of being connected to the land and being at home in the landscape."<sup>155</sup>

<sup>150</sup> van Dooren & Rose 2012: 3.

<sup>151</sup> From conversation with rangers, fieldnotes 09.12.2019.

<sup>152</sup> Mathews 2018: 392.

<sup>153</sup> *Ibid.*: 406.

<sup>154</sup> All of the rewilders live on Arran, though most are not originally from the island.

<sup>155</sup> Drenthen 2009: 290.

Similarly, planting trees can drastically reshape a landscape and thereby affects the ways in which people (can) read it.<sup>156</sup> This can clash with local identities and notions of heritage. It furthermore undoes the possibility of perceiving landscapes as timeless by establishing elements that notably change the qualities of landscapes. The problematic temporality of rewilding aesthetics is described by John Prior and Emily Brady:

“[...] Rewilding brings about a constellation of aesthetic qualities that are temporally and experientially challenging. [...] Rewilding demands of an aesthetic appreciator more flexibility and openness to change across time, insofar as unpredictability is characteristic of rewilding. [...] The anti- or minimal interventionist objective of rewilding is at odds with the preservation of existing beauty, and is likely to lead to the emergence of difficult aesthetic experiences such as ugliness and terrible beauty.”<sup>157</sup>

It is thus unsurprising that the tree planting at Glen Rosa receives mixed reactions. Pointing towards the dynamic and unpredictable character of rewilding, Prior and Brady’s argument resonates with Beatrice’s earlier statement that “the only certainty in what you should imagine is that [the rewilded landscape] is always changing.” Change is an essential part of rewilding landscapes, and this requires letting go of certain aspects of landscapes that people find beautiful, identify with, or that are meaningful in other ways. In Scotland’s heavily managed environments, this means that there will likely continue to be clashes between desires for rewilded landscapes and for cultural landscapes, which people also find beautiful and inspiring.<sup>158</sup> Adding to Prior and Brady, I suggest that a central way in which rewilding is aesthetically troubling is not only because of the constant changing of landscapes but because notions of beauty, too, are based on temporal reference points – or, on whose ghosts one perceives in a landscape.

## Grieving for Ghosts

So far, this chapter has told the stories of ghosts and how they inform perceptions of landscapes. But what practical relations do rewilders forge with them? Adding to Tsing’s arts of noticing, van Dooren and colleagues argue we need “arts of atten-

<sup>156</sup> As Tsing (2015) shows in the case of Japanese peasant landscapes, the loss of cultural landscapes can also threaten biodiversity. Though this critique has been voiced in Scotland too, it currently isn’t paid much attention to as most of the Scottish landscape remains in agricultural usage and unimpacted by rewilding.

<sup>157</sup> Prior & Brady 2017: 44. See also chapter 2 on “mess” in rewilding.

<sup>158</sup> E.g. Green 2016 for Country Life. A staff from CLL tells me that some local residents had complained that CLL was cutting down non-native conifers to replace them with native broadleaves, because they wanted trees that are green all year round. Part of CLL’s goal is to change how people prioritize such issues through community education.

tiveness:” it is not enough to become attuned to multispecies assemblages, lively or ghostly, we also need to learn how to *respond* to them in meaningful ways.<sup>159</sup> But how does one attend to ghosts?

In Munroe’s comic strip cited in the beginning of this chapter, one of the characters promises the dying orchid to remember it and its extinct bee partner. Not unlike the comic character, for many of my collaborators coming to know Scottish environmental histories brings along the realisation of loss. “We have no rituals for coping with extinction, ecological destruction or environmental loss. And that’s a problem,” writes journalist Jeremy Hance.<sup>160</sup> Hance reports on a movement of artists and activists who have decided to create such rituals of mourning. “Feral,” a collective of British performers, founded the “Remembrance Day for Lost Species,” which is commemorated annually on November 30<sup>th</sup>. The event aims to encourage people around the globe to learn about, and to grieve for extinct species by creating their own ceremonies and rituals of mourning.<sup>161</sup> Why do we mourn human deaths, but not those of other species? it asks. The Remembrance Day’s website serves as a platform on which mourning rituals can be documented and shared. One of the art pieces featured on the website is a war memorial graveyard for passenger pigeons by Camilla Schofield (2011). On the photograph one can see dozens of tiny white crosses planted in the soil, a miniature version of the graveyards erected for anonymous soldiers who died abroad during World War II. A golden-framed plaque in front of the field promises, like in the comic strip, that the birds will not be forgotten.

Anthropologist Deborah Bird Rose emphasizes the importance of mourning during these times of mass extinctions, writing that “mourning is about dwelling with a loss and so coming to appreciate what it means, how the world has changed, and how we must ourselves change and renew our relationships if we are to move forward from here.”<sup>162</sup> Mourning teaches us how to look beyond the lives and interests of our species. Haraway similarly proposes that “grief is a path to understanding entangled shared living and dying; human beings must grieve *with*, because we are in and of this fabric of undoing. Without sustained remembrance, we cannot learn to live with ghosts and so cannot think.”<sup>163</sup> Mourning is not only a form of care for ghosts, but is in fact a necessary practice for multispecies survival.

Having experienced the sudden and drastic sensation of loss on her walk in the Highlands, Beatrice also decided to create an art piece that facilitates mourning. She produced a protest piece titled “Foregathered wi’ the beast,” for which she erected a memorial stone at the location where the last Scottish wolf was allegedly shot.<sup>164</sup> In

<sup>159</sup> van Dooren et al. 2016: 3.

<sup>160</sup> Hance 2016 for The Guardian.

<sup>161</sup> Remembrance Day for Lost Species 2020.

<sup>162</sup> Rose, 2013 (np).

<sup>163</sup> Haraway, 2016: 39.

<sup>164</sup> Beatrice made a documentary about this project, available on YouTube (Searle 2019 on YouTube).

a guerrilla act she placed it opposite an older memorial stone celebrating the same event by commemorating the hunter, Polson, and the approximate year of the cull (1700). Into her stone, Beatrice carved the words:

In memory of the wolves  
Part of these lands lost to generations  
We await your return

Beatrice's artwork offers a juxtaposition to history as told, a recalibration of the event not as a triumph of mankind over nature but instead as a moment of loss – not just for wolves, but for the entire ecological community. The proximity of the two stones means that they now come as a double, it is difficult to see one but not the other. Beatrice writes about her stone:

“The guerrilla act of making and installing a stone that speaks directly into the space left by the wolves aims to challenge the story that has persisted for three centuries, remake the legacy of wolves in Scotland and mark the place for what it is- the start of the demise of the Highland ecosystem.”<sup>165</sup>

Like the pieces created for the Remembrance Day for Lost Species, making the memorial stone is an act of mourning. What is mourned here are not just the wolves that were hunted in Scotland, but also the wolves that were never born, and all those who suffered as a consequence. Wolves *belong*, the stone reminds us, not only in some distant past but also *here* and *now* – in the beholders' spacetime. The everlastingness of this belonging is underlined by the stone's timeless character: In contrast to the original memorial, Beatrice's piece contains little temporal information. Placed directly in the soil the piece looks like an anonymous headstone, featuring no names, years of life or death, or artist's signature. This lack of specificity indicates that wolves will continuously be mourned until their return.

It is commonly a central purpose of memorial stones to produce places of remembrance where loss can be located. While Beatrice's memorial stone does offer a space for grieving, its location makes it unlikely to draw in a crowd of mourners: the memorial stones are placed on opposite sides of a road in the middle of the countryside. The space is not designed for people to linger: there is no parking place, just a small lay-by, no bench to sit on, no hiking paths. Only few people come past here, and even fewer will stop and visit the stones. The location of Beatrice's stone makes it clear that providing a site for grief is not its sole purpose. Rather, it is a political act of protest that demands that humans re-contemplate our histories and our imposition over more-than-humans. Finally, it also carries a hopeful message directed to the absent wolves – “we await your return.”

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<sup>165</sup> Searle 2019.

In his research on threatened species, Thom van Dooren describes mourning as a practice of care, “a work of learning to acknowledge, to tell, and ultimately to dwell with [the] multi-faceted and ongoing processes of loss.”<sup>166</sup> But more than that, as the website of the Remembrance Day for Lost Species points out, mourning can be an act of protest: The “losses [of other species] are rooted in violent, racist and discriminatory economic and political practices,” and mourning “provides an opportunity for people to renew commitments to all that remains, and supports the development of creative and practical tools of resistance.”<sup>167</sup> In its uncompromising advocacy for wolves, the memorial stone can be read as a pan-temporal act of interspecies care, drawing in past and future into a politicized moment of deep now. Environmental pasts, and the ghosts that haunt Scottish landscapes, are not only recognized and mourned here but are also utilized to challenge anthropocentric notions of belonging and the damaging consequences these bring upon the entire planet.

### **Conclusion: Life in the Phantasmacene**

Rewilding offers imaginative possibilities for humans to perceive, and to engage with more-than-human environments. This chapter has explored the roles that more-than-human pasts play in this. While my collaborators contest the notion that rewilding seeks a “return to the past,” environmental histories play essential roles in their endeavours. As biodiversity is dwindling, past ecologies serve as reminders of possibilities of abundance, offering alternative visions of what liveable worlds might look like. Like the bluebells on Arran, the haunting absences and uncanny presences that I have described as ghosts offer sensory pathways that render extirpated lifeforms perceivable. Ghosts tell stories of loss and show how the Necrocene taskscape is imbued with death, thereby profoundly shaping how my collaborators read landscapes. To perceive ghosts requires becoming attuned to more-than-human histories, life and extinction stories, and disjunct temporalities. By engaging with ghosts, rewilding attends to the ways in which pasts are still lingering and continuously informing presents, thus blurring boundaries between these rigid temporal categories. Being attentive to ghosts opens the floodgates of time, allowing pasts to spill into presents, thus breaking apart linear notions of historical time flowing smoothly from a singular past to a singular present. Thinking with ghosts, we may begin to understand the ways in which absences matter in current landscapes, as well as to better understand the conflicts that may arise when people perceive landscapes differently.

Ghosts also bring with them the possibility of mourning, an act that recognizes their *belonging to* Scottish landscapes. Challenging assumptions that extirpations are historical facts that can no longer be changed, disclaimers of grief such as the artistic-activist work of Beatrice frame extinctions as ongoing, political decisions that

<sup>166</sup> van Dooren 2021: np.

<sup>167</sup> Remembrance Day for Lost Species 2020.

humans continue to make. But this means that there is also hope for change – the purpose of thinking with ghosts is not exclusively to retell multispecies histories, but also to learn how to move onward in less anthropocentric and damaging ways:

“Ours is a time of mass extinction, a time of ongoing colonization of diverse human and nonhuman lives. But it is also a time that holds the promise of many fragile forms of decolonization and hopes for a lasting environmental justice. Here, the work of holding open the future and responsibly inheriting the past requires new forms of attentiveness to *biocultural* diversities and their many ghosts.”<sup>168</sup>

Ghosts, in other words, are not only required to better comprehend pasts, but also to think more radically and compassionately about futures. This is truly an era of ghosts – the *Phantasmacene* – where we must rely on hauntings to “keep insisting that there are futures beyond postmodernity’s terminal time.”<sup>169</sup> In the following chapter I will explore how my collaborators envision these futures, the narratives that surround them, and the techniques through which they are being pursued.

“We can’t do anything to change the past. What I think we can do is use the past to inform the future.”

- Peter Cairns <sup>170</sup>

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<sup>168</sup> van Dooren 2017: 207 (original emphasis).

<sup>169</sup> Fisher 2013: 53.

<sup>170</sup> Interview, 19.11.2019.

## INTERLUDE: LANDSCAPES OF DEATH



*Figure 5: Felled trees and beaver dam at Bamff. Photograph by author.*

BOX 1: The landscapes that the beavers' management regimes produce are aesthetically difficult not only because they defy morals of tidiness. They are problematic because they are landscapes of death: Dead and dying trees line the riverbanks at Bamff (though some of these will come back to life through the beavers' skilful art of coppicing) [Figure 24]. Chewed-off branches float in still corners of the water, ready to be gnawed down or integrated into dams and lodges. Geographer Jonathan Prior states that of the British public, most people struggle when directly faced with death in landscapes (Prior 2019). Concordantly, the owner of another rewilding estate has told me that a point of conflict between her and other locals is her insistence on leaving deer carcasses on the hills as a source for carrion for Scotland's rare birds of prey. Prior argues that it is important for humans to learn how to cope with traces of death if we are to reduce environmental management. Many rewilders have learned to appreciate markers of death (such as dead wood) as they indicate the absence of human management (Prior and Brady 2017: 42). Beatrice furthermore tells me that "death in rewilding isn't the end. It's not death, it's not landscapes that are the problem. It's static landscapes that are the problem. [...] Death and rot and mess are guaranteed to be really abundant of life." Anthropologist Arnar Arnason writes about death in the context of organ donations, which can "make bad deaths good" (2017: 50). In rewilding settings, death can similarly become "good" through its usefulness to the ecosystem. As Beatrice states, it is possible to see death as a new beginning, an opening of possibilities rather than an end without continuation. Death can bring motion to landscapes, it moves things on. Thereby, a "dead" landscape is really a lively landscape, full of change and possibilities. It may be such landscapes that Donna Haraway envisions when she urges her readers to find ways to "live and die well with each other" across species (Haraway 2016: 1).

Yet, not all deaths can be made "good." Ghosts have not "died well," their deaths have not contributed to, but rather damaged the environment. The landscapes they haunt are not lively; rather, they are imbued with absences (see chapter 1). And not all contemporary deaths are equal either: In chapter 3, I will discuss the deadly side of rewilding's regimes of care.







## Chapter 2 – BEASTS Caring for Liveable Futures

*Figure 6: Beaver dam and fencing wire (photographs by author).*



## Chapter 2 – BEASTS

### Caring for Liveable Futures

“The Anthropocene, to the extent that the term is accurate, is not simply a universal epoch that divides the history of the planet into before and after human-kind. It is a roiling chaos of unfolding events that are not equal, or predictable, or fair. It is a spectre that blurs the distinction between the present and the future.”

– Paul Huebener (2020:20)

“The only thing I think similar, comparable to building [a cathedral] is undertaking a rewilding project,” stonemason and environmentalist Beatrice tells me, “Because, in order to start that, or even to be a part of it, [you] have to be a piece, accepting of the idea that you [won’t] see it finished in your lifetime.”<sup>171</sup> Historically, the construction of cathedrals has often taken several centuries to complete – as an extreme example, the cathedral of Cologne was concluded 632 years after the laying of its foundation stone in 1248.<sup>172</sup> Similarly, and unlike most other environmental-

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<sup>171</sup> Interview, 28.02.2020. Later, Beatrice retracts part of this comparison because, different from building a cathedral, rewilding to her does not follow a predefined blueprint and does not pursue a set goal that is ever completed.

<sup>172</sup> Kaminske 2019: 78–79.

ist endeavours, rewilding projects usually follow a slow approach to conservation, oftentimes spanning out over extensive time periods, if they have a temporal limit at all. Diverse temporalities and rhythms of more-than-human lives are in the focus of rewilding endeavours, and this means that care timelines oftentimes exceed generational limits. The owners of the Glenfeshie Estate in the Scottish Highlands have for instance committed their land to rewilding for two hundred years, the time estimated for the growth of a fully matured native forest.<sup>173</sup> At Bamff, the Ramsays only began their rewilding project after Sophie, Louise’s and Paul’s daughter, agreed to keep the project running in the future. And in Cumbernauld, even though the Living Landscape’s activities are limited to the lifetime of the project’s funding, the organizers hope that locals will continue the rewilding work afterwards.

What is it that commits my collaborators to participating in these larger-than-life projects? What futures are they envisioning, and how are they pursuing them? This chapter will explore the possibilities of emerging, wilder worlds filled with all kinds of beasts.<sup>174</sup> The first section will describe the visions of future natures that my collaborators are developing. I argue that the projects at Bamff and Cumbernauld both draw on ethical principles of *multispecies conviviality* to establish ways of living that foster biodiverse flourishing beyond mere survival. The second part of this chapter will focus on the practices, techniques, and technologies through which particular futures are pursued, and that constitute the rewilders’ *modes of futuring*.<sup>175</sup> Despite its ethical foundations, however, conviviality is not always harmonious: the third section describes some of the personal sacrifices my collaborators have made, as well as the limits to their abilities to prioritize conviviality. Finally, I address some further hurdles people face in the pursuit of convivial futures, by analysing the multiple and sometimes discordant temporalities that complicate practices of care for wilder futures.

## Narratives of Future Natures: Between Anxiety and Hope

“We only have eight years left to save the planet,” Scott often mentions during our volunteer meetings. Although he says it in a joking tone, his statement reflects the anxious urgency that so many people feel these days. Ecoanxiety is a widespread phenomenon, which can overwhelm and paralyze those who experience it.<sup>176</sup> Hope

<sup>173</sup> Picken & Nicolson 2019 for the BBC.

<sup>174</sup> In Scotland, the term “beast” is commonly used as synonymous with “animal” or “creature.” I am using this term in this chapter because it is evocative: beasts are also untamed monsters, terrifying beings, and beyond our grasp. Tsing et al. (2017) use “monsters” as their counterpart to “ghosts” to describe life as entangled and unclassifiable. Similar to their intention, I use “beast” to emphasize the unknown and shocking aspects of building a future with more-than-humans.

<sup>175</sup> I am borrowing this term from a panel I presented on at the EASST+4S (2020) conference, “Modes of Futuring between Care and Control” convened by Franziska Dahlmeier, Franziska von Verschuer, and Markus Rudolfi.

<sup>176</sup> Coffey et al. 2021.

is a much-needed antidote to this, and that is exactly what one group of rewilders are specializing in: When I began this project, one of my first steps took me to Peter Cairns from SCOTLAND: The Big Picture, a collective of photographers, filmmakers, and other storytellers that specialize on rewilding advocacy. On a cold November morning, I caught the earliest train from Glasgow to Aviemore in the Cairngorms National Park to interview Peter. During our conversation, I asked Peter about his understanding of rewilding:

Interview, 19.11.2019.

“The reason [rewilding is] such a difficult subject, is because it’s so multi-layered, so multifaceted [...]. Everybody has a different idea about what rewilding means. Everybody has a different idea about, you know, what is the top priority, what is the bottom priority and everything in between. But I suppose if you’re asking me personally, [...] our business is *selling hope*. That’s what we do. We sell hope for a better future. [...] And our primary objective is to send people away, believing that there is a brighter future ahead. So we’re selling hope. And rewilding really is about a brighter future. For me, it’s about a brighter future for all species, including humans, but not at the exclusion of all the other species. So it’s a, it’s a brighter future. For nature and for people. [*pauses*] Sounds terrifically twee, but you know what I mean?”

Looking at Peter’s statement, it is not too surprising that rewilding is becoming a popular vessel into which people channel their nervous energy.<sup>177</sup> He is far from the only person viewing rewilding as a hopeful practice: A guerrilla tree planter, who spends their free time growing saplings and planting them along riverbanks and edges of fields, told me for instance that their increasing awareness of the gravity of climate change motivated them to become active. They chose tree planting as method because of the plants’ ability to sequester carbon from the atmosphere, to provide habitat, and to stabilize erosive ground. It gives them hope that there can be a healthy future and stops them from drowning in the overwhelming sea of catastrophic climate news.<sup>178</sup> In chapter 1, we have seen how Beatrice similarly tackles her anxiety through rewilding activism. Like Peter, for her and many of my other collaborators, rewilding is a hopeful practice that offers a perspective for brighter multispecies futures. So, what exactly is it that they are hoping for?

<sup>177</sup> During our conversation, I am struck by the explicitly economic language Peter uses, in which hope is a sellable product. The scope of this study does not permit a detailed discussion of the connections between rewilding and capitalism, see Manzi (2020) and Donati (2019) for studies on multispecies conviviality and capitalism.

<sup>178</sup> Fieldnotes Nov. 2019.

### **Bamff Wildland: Reintroductions**

Although Louise and Paul Ramsay have been rewilding parts of their land for years – including through the reintroduction of beavers in 2002 – their commitment to turn a third of their property into “Wildland” was a more recent decision. Louise and Paul are both retired and wanted to secure a long-term perspective for their project before pouring more resources and time into rewilding. At first, none of their children were interested in taking over the family estate as heirs and inheriting the responsibility for their rewilding project. However, after some back and forth, their daughter Sophie finally agreed and moved her family (her partner Dave and their toddler Flora) up from London to rural Scotland, thereby making possible her parents’ dream.<sup>179</sup> She now co-manages the rewilding initiative.

With the perspective of rewilding to continue in the foreseeable future, the Ramsays are preparing for large steps: removing sheep from their land, planting native trees, and bringing specialized “native” grazers in. Simultaneously, they are attempting to raise funds to cover the costs of animals, etc. After my stay with them, they launched a successful Crowdfunder campaign – headed by Beatrice – through which they fundraised over £39k in only three months. In the campaign plea they outline the rewilding steps they will undertake with the donated money, which include paying for “pigs & ponies, perimeter fencing, wildlife gates and essential monitoring,” as well as “osprey platforms, bird and bat boxes, the digging of ponds and scrapes, wildflower planting and amphibian reintroduction.”<sup>180</sup> With these steps they are pursuing what Louise calls “catalysed rewilding,” giving certain critters or processes a boost to set things off in the right direction, while simultaneously decreasing their active management.

The humans at Bamff, whose livelihood is closely tied to the land, are planning to sustain themselves and the project through their ecotourism business, whilst hoping for the establishment of government grants and subsidies.<sup>181</sup> The Ramsays, their tenants, and their visitors will continue to live on the estate, surrounded both by farmland and by Wildland, with the reintroduced animals roaming the land freely.

<sup>179</sup> Sophie set a condition before deciding to return: No more game shooting of pheasants at Bamff. Until then, her parents had permitted a tenant the release and hunting of the birds on their land. Sophie did not feel comfortable with this enactment of death at the site of a conservation project (see chapter 3 for the necropolitics of rewilding). Her parents agreed and phased out their agreement with the tenant.

<sup>180</sup> Bamff Wildland Crowdfunder. 2021.

<sup>181</sup> During my research a reform of Scottish land subsidies was impending. Many rewilders hope that in the new act rewilding projects will qualify for similar subsidies as farms currently do by classifying them as a service for “public good” through carbon sequestration and biodiversity maintenance.

### **Cumbernauld Living Landscape: Lively Urban Spaces**

CLL notably differs from the rewilding at Bamff in its setting in a densely populated urban space. Cumbernauld is one of Scotland's five "New Towns," designed cities that were intended to solve a post-war housing crisis.<sup>182</sup> The New Towns became an attempt to materialize imaginaries of a modern Scotland – with limited success. Constructed in 1956, pressure was high on Cumbernauld to make up for the aesthetic and functional failings of earlier New Towns. The city was thus equipped with futuristic infrastructures such as multi-storied highway crossings and an indoor city-centre interlinked by bridge walkways. Some decades after its construction, however, the unusual structures that once signified an innovative future have corroded, and instead of becoming a suburb for Glasgow's middle class, the town is home to impoverished and societally underserved communities. Infamous for its aesthetic, a poll organized by British television network Channel 4 in 2005 identified Cumbernauld's city centre as one of the UK's greatest architectural sins and the building most people would like to see demolished.<sup>183</sup> No longer a beacon for a techno-aesthetic future, the town is dismissed as a "concrete jungle."

Putting a spin on this reputation, the staff and volunteers of CLL are making improvements to Cumbernauld's green spaces that enhance the liveability for locals, both human and more-than-human. Their interventions, ranging from activities like litter picking to the planting and felling of trees, seek to strengthen biosocial communities and to increase environmental stability and abundance. The backdrop for this work could not be better, as Scott who runs the volunteer team explains to me:

Interview, 05.03.2020.

"I think that Cumbernauld has long been looked on as a joke in Scotland. In the past like it was considered like a beacon of [what] urban development's going to be. A lot of people move out here, and [it] kind of just became like concrete jungles, where a lot of poorer people have moved in. All of these areas are really deprived now and people kind of see it as- like, because the kind of architecture looks quite weird to people, and the town centre is a case of point that it's just like a labyrinth of weird stuff, buildings built on top of each other. It kinda looks like an airport, but it's like a shopping centre, it's really weird! [...] It's considered a joke and so quite often referred to as one of the worst towns or cities. [...] And it's like- It's not terrible! It's an area that's got nearly 50% green cover, which is like one of the highest in Scotland, one of the greenest areas! And I don't know anybody [who] could walk through Cumbernauld Glen or any area of that, you know up at Whitelees, down at Abronhill, over at Seafar, going through all these places and see the diversity

<sup>182</sup> Taylor 2010: 84.

<sup>183</sup> BBC 2005.

of habitats. [...] I don't know anybody [who] could come away from being here and not being like struck by it.”

Scott goes on to explain that the unusual architecture of Cumbernauld with its many layers of buildings and bridges crossing over and through each other does not clash with his vision of a diverse biosocial city. In the contrary, it adds interest and character to the place. And this is something Scott thinks could be turned into an asset:

Interview, 05.03.2020

“Another thing that's always been one of my dreams is to like do like some sort of ecotourism. I would love it if there was like some sort of ecotourism [to Cumbernauld]. Like, even like, even like Glen Cryan, if you come here and we'll do a walk, maybe like- Outlanders, there's like the big Outlander film down there, and Americans love that.<sup>184</sup> Get them in there for that. But then you've also got like pine trees and maybe got a wee café, or somewhere nice in there. And then they could just come out and we just do like nature walks and stuff. You know, it's a process maybe, doing that over a few days. [...] You know, there are so many amazing sites. Urban, you know, urban ecotourism. You see it's just like, join the two up together.”

In the context of modernist Western urbanism, in which the term “urban ecology” was considered oxymoronic until recently, Scott's vision for Cumbernauld is truly radical.<sup>185</sup> Moving past notions of urban – nature divides, he is instead looking to find new possibilities for living in the more-than-human city. Traces of human lives and of technological development do not need to be removed, but instead offer potential for sustainable and inventive futures. *Living Landscapes are changing landscapes*. Having been a project of hope for a bright Scottish future in its conception in the 1950s, Scott believes that Cumbernauld can once more become the vessel for radical visions of change and renewal.

### **The Human in the Wild Landscape: Futures of Multispecies Conviviality**

A common critique by rewilding sceptics is the idea that rewilding excludes humans from wild land. Environmental historian Dolly Jørgensen states that rewilding “attempts to erase human history and involvement with the land and flora and fauna,” and thereby “[excludes] humans in time and space from nature.”<sup>186</sup> This is perhaps true for some initiatives, which thereby reproduce dichotomic notions of nature and culture. However, my collaborators approach the topic contrarily, as Peter makes clear in our interview:

<sup>184</sup> Part of the TV series *Outlander* was filmed in Cumbernauld Glen in 2014.

<sup>185</sup> Hinchcliff & Whatmore 2006: 123.

<sup>186</sup> Jørgensen 2015: 487.



Interview, 19.11.2019.

“We’ve divided the country up so that there are urban areas where people live, and there are agricultural areas where farming takes place. And then there’s nature. And nature, if it’s going to be nature has to have a line drawn around it, and it has a designation, it’s a national park or a special area of protection or whatever. And we end up with this patchwork quilt effect. And nature becomes something different, something separate. And I think that reinforces this narrative of us not being part of nature, but being separate from it. And in some cases that manifests as being not only separate, but superior. Here to act as owners or tamers of the wild.”

Critical of this dichotomic division, Peter goes on to emphasize that it is important to think about nature as being part of all places, be they rural or urban. He sees humans as an intrinsic part of nature, and rewilding as an opportunity to dissolve such spatialized binaries.

Both at Bamff and at CLL, human inhabitants are similarly essential parts of the rewilding landscape. The visions the initiatives pursue do not consist of geographically and historically separate areas of “nature” but of living projects that thrive on human participation. CLL is contesting prevalent understandings of urban spaces as opposed to nature by focussing on the more-than-humans that share Cumbernauld’s landscapes. In their aim to create a multispecies city that is home to an even greater variety of lifeforms, they are trying to make Cumbernauld and its surroundings inviting to other species. Already, their efforts are bearing fruit: since the beginning of the project, the pine marten (*Martes martes*), a rare species in Scotland, has reclaimed Cumbernauld’s woodlands. Rumours of red squirrels (*Sciurus vulgaris*) chasing through Cumbernauld’s backstreet remained unconfirmed, but hopes are high that the charismatic rodent will soon follow its ally back to the area.<sup>187</sup>

CLL’s approach concords with William Cronon’s thinking, who has argued that nature does not need to be grand, vast, and removed from humans: “The tree in the garden is in reality no less other, no less worthy of our wonder and respect, than the tree in an ancient forest that has never known an ax or a saw – even though the tree in the forest reflects a more intricate web of ecological relationships.”<sup>188</sup> At CLL, the aim is to bring people closer to the local environment and get them invested in relations of care. Their visions of the future don’t revolve around secluded “wild” spaces, but rather a shared, multispecies cityscape.

<sup>187</sup> Pine martens prey on “invasive” grey squirrels, which are a threat to native red squirrels through habitat competition and disease transmission. Even though pine martens also prey on red squirrels, these are harder to catch than their imported relatives. Pine martens and red squirrels are thus now considered to be allies.

<sup>188</sup> Cronon 1996 [1995]: 24.

At Bamff, the inhabitants are similarly trying to pursue futures in which humans and more-than-humans share spaces and resources. The Ramsays are consciously entangling their dwelling activities with the ones of more-than-humans. The tasking of beavers, for instance, is becoming their business, as the futures they pursue are dependent on the critters, both financially (about half their tourists come because of the beavers) and ecologically. Simultaneously, there is no intention to reduce human presence on the land. Their goals consist of landscapes that are shared by, and useable for a diverse host of humans, animals, and others.

Despite the different settings and visions of the two initiatives, they share fundamental values about what futures should entail. Instead of envisioning a rewilding land that is void of humans, they attempt to instate ongoing multispecies relations of care. Both projects wish to create futures in which not only humans, but all kinds of beings can flourish – not in separation, but collectively. I see this as constituting a form of *multispecies conviviality*.<sup>189</sup> Conviviality (translatable as “to live with”) was coined as a scholastic concept to describe practices of eating together.<sup>190</sup> The term was picked up by philosopher Ivan Illich, who used it as a critique of capitalism and its alienating systems of industrial production. Illich considers “conviviality to be individual freedom realized in personal interdependence and, as such, an intrinsic ethical value.”<sup>191</sup> While Illich’s work focusses on production – he calls for the creation of tools and technologies that are available to, and that can be produced by the general population, rather than being controlled by a technocratic elite – other scholars have applied the concept to different environmental and social justice issues.<sup>192</sup> Translating the concept to multispecies studies, Thom van Dooren and Deborah Bird Rose describe conviviality as “the ethics of sharing places” between species, writing that this requires an effort to attend to and accommodate for the needs and lives of others.<sup>193</sup> Conviviality, then, can be understood as a radical ethics, a commitment to creating spaces of shared liveability in which various agents are mutually invested.

The spaces my collaborators inhabit are home to other species as much as to humans. Spaces overlap in their historicities, their meaningfulness, and the livelihoods they nurture. As discussed in chapter 1, learning the ways in which places are multiply storied is oftentimes an important aspect of rewilding work. It allows rewilders to see the networks and interdependencies that facilitate liveable worlds. How is this

<sup>189</sup> I am grateful to Raúl Matta for familiarizing me with the concept of conviviality in our shared work on the FOOD2GATHER project. This chapter has benefitted greatly from our discussions on more-than-human assemblages in the context of migrant foodscapes (cf. Starck and Matta 2022).

<sup>190</sup> Adloff 2014: 6; Wise and Noble 2016; Nowicka and Vertovec 2014.

<sup>191</sup> Illich 1975[1973]: 24.

<sup>192</sup> A group of scholars has for instance collectively developed two manifestos for “convivialism,” in which they call for crucial changes in human activity in response to climate change, biodiversity loss, poverty, war, and political corruption amongst other things.

<sup>193</sup> van Dooren & Rose. 2012: 5, 17.

knowledge translated into action in the making of futures? The next sections will ask “what would it mean, in a multispecies context, to really *share* [...] places,” and what are rewilders doing to make this possible?<sup>194</sup>

## Modes of Futuring: Tools and Techniques of Care

“I have tried handing animals weapons, tools for their revolution. Lord knows they need a revolution and have suffered enough abuse from the hand of man. They generally stare at me blankly. They look at the anthropomorphic machine I extend to them and stare at it, again, blankly. With bare look and still, corporeal thickness, these animals make no motion towards arming themselves. Now I feel like the idiot.”  
 – Ron Broglio (2012: 13).

It is not always easy to know how to move towards desired futures, especially if this entails collaboration with other species. So how are my collaborators trying to bring about their visions of convivial futures in practice? There are concrete tools and techniques my collaborators have devised in their pursuit, and these constitute what I consider to be *modes of futuring*. Modes of futuring are essentially practices of care that aim to bring about particular futures.<sup>195</sup> A widely practiced example for this is tree planting. At my first tree planting event, much emphasis is given to teaching participants the “proper” way of planting before releasing the volunteers onto the hill with their sapling bags and shovels:

Arran, 09.12.2019

*Planting trees on Arran happens with a very specific and care-full technique: first, you scrape the grass or bracken off the ground using your spade. You need to find a good spot for this, without much foliage and with soil that can be easily cut by the spade, but that will also provide enough support for the tree. Next, you push the spade deeply into the soil. You never use the arch or heel of the foot to drive the spade in, always the ball. Then, you make another cut, creating a t-shape in the ground. Keeping the blade embedded in the ground, you lever the soil up with the spade, creating two loose flaps. After pulling the spade out, you lift the flaps with your hands and place a sapling in the gap between them. The sapling needs to be planted deeply enough to immerse its roots entirely and be covered by an additional finger of soil. Placing the dangly roots into the ground can be quite tricky: They*

<sup>194</sup> Ibid.: 2.

<sup>195</sup> In a conversation about the tools that are required to bring about more just futures for all species, Haraway and Endy list amongst them care, storytelling, play, and activism (Haraway and Endy 2019). My main focus in this chapter is on care (albeit in an activist setting and sometimes playful manner), chapter 1 has elaborated on activism and storytelling.

*stick out into all directions, and often the cut in the soil is too narrow for their reach. Once the roots have been covered, the soil is carefully pressed down by foot. This needs to be done evenly, so that the sapling won't stick out diagonally rather than reaching up directly to the sun. Finally, a bamboo stick and plastic tube are installed to protect the sapling from deer and voles. The tube is pressed into the soil, which concludes the process. One of the other volunteers wishes each sapling good luck before moving on.*

Without the right careful practice, the saplings have little chance of surviving: not sufficiently covering the roots with soil, for instance, can cause them to dry out. Attaching the plastic tree guards not securely enough makes them vulnerable to predation from deer and rodents. Planting trees thus requires specialized skills of the volunteers that include embodied knowledges (for instance, how to place your feet on the spade without risking injury) and attentiveness towards the plants' needs. Thereby, tree planters and trees are enwrapped in bodily intimacies of care: Roots have not developed to require the touch of human hands. They are best equipped to sprout from a seed directly into fertile soil, digging deeper into the ground and anchoring in place for decades to come. Yet, in the current state of Scottish ecosystems, the best chance trees have to survive is to be planted into predetermined places by humans, protected by plastic tubes. The reproductive success of native trees has become largely dependent on the aid of humans, who have cultivated practices of care derived from “multiple, material, bodily, and semiotic learning histories.”<sup>196</sup> The futures of trees, forests, and all that flourish with them is thus deeply entangled with the skilful ability of people like my collaborators to behave *care-fully* towards the saplings.<sup>197</sup>

### Technologies of Futuring

Not long after my planting experience on Arran, I partake in a tree planting event that CLL has organized for the local community on a field in the heart of the Cumbernauld. It's an important event for CLL, as some of the locals have mixed feelings about the project's conservation vision, and so the organisation wants to improve their image. Being a “new town,” many of those who were involved with the initial planning of Cumbernauld's green spaces still live in the town today, and some feel offended by the changes CLL wants to make. They have formed their own environmental group, which focusses on issues such as the maintenance of war memorial

<sup>196</sup> Schroer 2021: np, writing about human-falcon intimacies in captive breeding for rewilding.

<sup>197</sup> In her study on human-soil relations, María Puig de la Bellacasa proposes that “care time suspends the future and distends the present, thickening it with a myriad of demanding attachments. Even when care is compelled by urgency, there is a needed distance from feelings of emergency, fear and future projections in order to focus on caring well” (2015: 707). The necessity to momentarily detach from disturbing notions of the future could be a reason why my collaborators choose rewilding as a response to their ecoanxiety.

gardens. Before the public tree-planting event, Scott tells me he is nervous that the group will turn up and disrupt the event, as they have done at previous occasions. Or perhaps even worse, that nobody will show up at all. But to the surprise of the CLL team, the opposite happens: over three-hundred visitors come over the course of the day to plant a tree. Wellies, shovels, and gloves are being passed around, and by the end of the day we've run out of saplings. The event caters in particular to families with young children: games, quizzes, and keen volunteers offer plenty of opportunities to learn about trees and other native forest critters.<sup>198</sup> But a highlight of the event is its clever involvement of technology: the CLL team created a phone app that visitors can use to log the coordinates and species of the tree they planted. This means that, if all goes well, they can come back and visit "their" tree in the future and witness its growth.

The usage of the phone app is an example of how "alliances between biological and technological entities" can generate "different types of convivial configurations."<sup>199</sup> The app opens new avenues for interspecies relations that would otherwise not be possible: with over three hundred trees planted closely together, it is unlikely anyone would find the tree they planted again. Through the app, the planters can return to their tree, and this gives them the opportunity to form a commitment to their tree's wellbeing. The phone app thereby can be thought of as a *convivial technology*, a function that fosters convivial relations.<sup>200</sup>

At Bamff, the modes of futuring similarly revolve around ways of establishing futures of shared liveability, and here, convivial technologies are also recruited. After the beaver reintroduction, the Ramsays had to find ways of living together with beavers that would be sustainable in the long term. This required some creative problem solving: Known for their architectural prowess, the new residents at Bamff quickly built numerous dams in the stream that runs through the property. Before their arrival, the Ramsays had dug out a pool for the beavers, which they showed little interest in. Instead, they quickly made their own pools by blocking and slowing the stream. Their activities drastically changed the riverine landscape: the stream is now much wider and slower, twisting through the land in beautiful curves, cascading over dams in myriads of small waterfalls, into and through the many pools the beavers have made. But although the Ramsays are very open towards the environmental transformations cause by the beavers, there are certain dimensions of the land that the beavers mustn't change. These include basic infrastructures like the unpaved dirt road that leads across the property and to the buildings. The road runs through the landscape of ponds that the beavers have created over the years, and across the

<sup>198</sup> "Play" is another tool for futuring that Haraway and Endy (2019) propose.

<sup>199</sup> Manzi 2020: 28.

<sup>200</sup> Vetter 2017. The concept of convivial technologies was coined by Andrea Vetter, who uses it to think about the role technologies play in radical degrowth movements. My usage diverges from hers: instead of focussing on capitalist relations, I use the term to refer to the material and immaterial entities that have the potential to foster multispecies conviviality, and that rewilders therefore utilize for their modes of futuring.

stream that is the locus of their dams. As a consequence of their building activities, the road was regularly flooded in the first months after their arrival. This was a problem, as the Ramsays and their tenants need the road to be able to live at Bamff – not only for their own access, but also for the visitors of their ecotourism business, who might not be prepared to ford flooded dirt roads. To assure possibilities for living together, the Ramsays thus had to create technologies that prevent the road from flooding without compromising the beavers' activities. In this case, the solution was simple: They laid a plastic pipe under the road through which the water now runs. The upstream end is encapsulated by a big wire cage that stops the beavers from blocking up the pipe [Figure 7]. Several caged up floatational devices of this kind are spread around the property. On my first walk across Bamff, Louise takes a bunch of photos for their social media profiles. It is important to show people that easy and cheap tools can stop beavers from damaging important infrastructure, she explains.

The modes of futuring that my collaborators deploy to pursue convivial futures are versatile: they range from intimately physical knowledges of other critters to phone apps and floating devices. These are just a few amongst a myriad of ways in which rewilders try to bring about convivial futures. However, conviviality is not a state that is achieved once, after which all is settled. Instead, conviviality requires constant negotiations and creative engagement.

### **The Good, the Bad, and the Ugly: Staying with the Trouble and Living with the Mess**

Even though much of the Ramsays' activism is centred on beavers – Louise and Paul are the founders of the Scottish Wild Beaver Group, an activist charity advocating for the protection of beavers in Scotland – there is a notable absence of “beaver kitsch” at Bamff. Before my first visit, I had expected at least a few signs drawing attention to the rodents, some beaver-themed décor, and perhaps a selection of souvenirs for their visitors to purchase. But I quickly learn that this sort of hype is not what the Ramsays are looking for. They are not interested in turning Bamff into a beaver theme park or spreading a sentimental image of the beasts. When I ask them about the beavers, Louise cannot tell me exactly how many currently live on their land. They don't name the beavers or keep close track of the individuals. This doesn't mean they're disinterested: Paul walks along the stream nearly every day to catch a glimpse of the beasts, and Louise takes pride in showing the dams to visitors. Yet, they are not pursuing an intimate relationship with the creatures. “We don't see them as pets,” Louise explains to me. “We very much see them as wild animals. And so we really want them to stay quite shy.” A quiet walk along the stream or a night in the “Hideout” pod are sufficient to witness the more-than-human other without drawing them into relations of dependence. Conviviality, this shows, does not necessitate intimate relationships between individuals but can describe the abil-



Figure 7: Flotational device at Bamff (photograph by author).

ity to share space without disrupting each other's lives.<sup>201</sup> By keeping a distance, the Ramsays are facilitating opportunities for the beavers to live autonomous lives outwith human management, and this requires giving up control over aspects of the land, as Louise explains:

Interview, 15.03.2020

“You can't be, you can't be too- What was the word you used? Imperial, [*laughing*] you know, imperialist with [the beavers]! You know, you can't say “No, no, no, you can't do it like this. You should do it like this!” You've got to just let them do their thing. [...] You've got to let go [of] your possessiveness. I mean, one of the things that the beavers did quite early on was they cut down a bird cherry next to the drive. And I'm still in mourning for that bird cherry, I loved it! Because, you know, there's just about a month in the year when bird cherry comes into flower. Every time you go past it just lifts your heart, you know. Bloody beavers! Bloody well killed my bloody bird cherry! [...] I could easily plant some more and just put wire around them. [...] But I always think it's important to tell that story because I do understand why

<sup>201</sup> Bredewold et al. list as a condition for convivial encounters (between humans) the freedom to (dis)engage (2020: 2057). Though I will later turn towards the limits of such freedom for more-than-humans, it is fair to state that the Ramsays hold it as an ethical ideal in their relations with beavers.

people get upset when beavers cut trees. And I mean, it is upsetting. But I think we have to stop thinking we own everything! You know, we don't *own* the trees! I mean, obviously we do in some sort of legal sense because it is our land. But it shouldn't- You know, the humans *have* to be less anthropocentric about everything. We have to learn that. Somehow. It's a difficult lesson."

What Louise describes is a cost of conviviality. Living together with more-than-humans in convivial relations requires personal sacrifices, including undesirable changes to a familiar landscape. In this case, there would be an easy workaround: Louise mentions the possibility to wrap chicken wire around trees, an easy and cheap way to protect individual plants from beaver teeth. Yet, the Ramsays opt not to replant or guard their favourite trees. While it pains Louise, she lets go of the tree that brings so much joy to her. With that decision, she gives up the idea of having unique ownership of the land and integrates herself into the more-than-human community of agents who have a mutual stake in the spaces they inhabit. Living with beavers means letting go of micromanaging the land and instead requires finding beauty in the shared and messy processes of world-making. However, this does not always come easily. As Louise says, these are hard lessons to learn. And they come harder yet to some:

Bamff, 15.03.2020

*Over dinner, Louise and Paul tell us a story about a neighbouring farmer family: With kids around the same age, they used to have quite a good relationship with them. This changed, however, after the beavers arrived. From 2001 on, beavers had escaped from various reintroduction projects across Scotland and started breeding in the Tay catchment and its tributaries, where they were possibly joined by some Bamff beavers in the following years. One morning, the neighbour found a such beaver escapee on his farmland. Furiously, he called the Ramsays at 7am, shouting at Paul because he thought that they had released them onto his land intentionally. Louise called back later, explained they hadn't released the beaver, and invited him to come over and see what their land looks like now with the beavers there. To this he replied, "I know what it looks like: it's a bloody mess!"*

It is perhaps not too surprising that the farmer is opposed to having beavers on "his" land. After all, it is safe to presume that they have quite different plans for the landscape than he does. To him, the rewilded land of the Ramsays reads as being in a state of *mess*.<sup>202</sup> By definition something untidy and lacking (human) organizational structure, mess is close to the heart of rewilding – it is an inevitable outcome.<sup>203</sup> Yet, this does not mean it is easy to come to terms with. In the previous chapter, I have written about the temporalities that affect aesthetic perceptions of landscapes.

<sup>202</sup> See Interlude: Landscapes of Death.

<sup>203</sup> Oxford English Dictionary 2021.



Adding to this, I suggest that the pursuit of convivial lifeways can similarly bring about “difficult aesthetic experiences such as ugliness and terrible beauty.”<sup>204</sup> To the neighbour, the changes the beavers bring are undesirable, as they neither enhance the aesthetic, nor the productive qualities of his land. Worse yet, they are likely to get in the way of his own plans for the land, cause him extra work, and make his land “ugly.”<sup>205</sup> This does not mean that the farmer has only profit and his personal interest on his mind. Reflecting on her own difficulties of coming to terms with Paul’s “untidy” land management practices, Louise frames the need for “tidy” landscapes as a moral issue:

Interview, 15.03.2020

“Well, historically, farmers always thought that they should keep the land tidy. And it was their job to keep it tidy. And so if there were, you know, fallen down trees, they should get them cut up and removed. And they didn’t want scrub, because scrub is untidy, and fields should be tidy and fences should be tidy. The vision of the beautiful farm is the tidy farm. And I think it’s a sort of moral thing. Tidiness is a, it’s a moral issue for people, you know. There’s something quite immoral about letting, letting your surroundings get untidy. [...] [But] if it’s going to have a lot of wildlife in it, [land] needs to look what used to be considered untidy. [...] I think I’ve taken quite a long time to understand. And actually, when I... you know, when we first came here and Paul already got his degree in ecology and conservation, and I was, saw myself as an environmentalist and I felt I cared about the environment, but I didn’t have that training. And I felt that- I felt that he was quite lazy about not tidying up and things like that. And slightly embarrassed that our neighbours would think that we were a bit lazy, you know. And I, I can relate to that mindset actually, but over the years, I’ve just gradually, gradually, gradually understood that this is a really positive decision with really good reason. And up to the point where I’m now a complete tyrant about it. [...] So I think my own perception has taken quite a long time to shift, but having arrived the age of sixty-seven, finally in a place where I get it, I’m now a kind of evangelical, you know, untidy countryside person. [*laughs*]”

Louise’s story carves out the ethical dimensions of landscape aesthetics: ugly and messy landscapes are not only aesthetic problems, but are culturally linked to notions of care, wherein pursuing practices that produce “tidy” landscapes is equated with taking good care of the land, whilst allowing “messiness” is seen as a form of neglect. This makes the pursuit of conviviality a complicated endeavour, as it clashes with existent moral pressures to keep farms “beautiful” and “tidy,” as Louise

<sup>204</sup> Prior & Brady 2017: 44.

<sup>205</sup> My collaborators say that many farmers are concerned that beavers will cause floodings on their fields or take down trees they need themselves.

describes. The aestheticizing gaze that seeks orderliness finds it most easily in the signs of human management. Beaver activities disrupt the clear-edged lines and borders that are the symbols of such human tidiness, and thus are interpreted by the neighbour as signifying a lack of care.<sup>206</sup> In this view, more-than-human agency clashes forcefully with the role of the human as the carer of the land. At Bamff, however, care is practiced from within the ecological community rather than from above. It is a nuanced equation that prioritizes more-than-human agency, making care not something imposed onto the land but an interspecies collaboration. When I take visitors on a guided tour around Bamff, they struggle to find the right terms to describe the sights of more-than-human autonomy and care unfolding in front of them. Walking past the beaver ponds, one visitor thinks out loud: “It looks so *messy!* That’s not a great word, actually – *unmanaged!* But then again, the beavers *are* managing the landscape!”<sup>207</sup> Calling their activities “management” underlines the beavers’ ability to participate skillfully in the becoming of the landscape.

Conviviality, as it is pursued at Bamff, is constituted by the affective connections between more-than-human “actants.”<sup>208</sup> Thus, its precondition is the possibility for beasts to be involved with the land *agentively*. As such, rewilding necessitates a flexible ontology of futures as open to be shaped by humans and more-than-humans alike. Tolerating the mess that the collective living of divergent agents generates is necessary, albeit challenging. It demands humans make compromises and it can cause trouble, for instance disrupting neighbourly peace. Is there a limit to how much trouble my collaborators can tolerate?

### Almark: Crossing the Line

In old Scots, “almark” is a name for “a beast accustomed to break fences,” or “an animal that cannot be restrained from trespassing.”<sup>209</sup> Like the beavers that crossed to the neighbour’s land, almark pay no attention to the borders of human properties and pass through the landscape according to their own will, thus complicating “human attempts to live with them.”<sup>210</sup> How does one live convivially with such a beast?

At Bamff, the Ramsays have experimented with animal reintroductions before the beavers. A while back, they decided to host a herd of wild boars in their forest that needed rehoming. Like wolves, boars were extirpated from Scotland some centuries ago and remain unpopular amongst many rural communities. In anticipation of the arrival of the pigs, the Ramsays thus built an electric fence around a designated part of their property. They were supposed to receive a “non-breeding” herd consisting of two females and an infertile, intersex alpha. The pigs were meant

<sup>206</sup> Hugh Warwick (2017) has used the term “linescapes” to describe the British countryside because of its extensive fragmentation through all sorts of lines such as fences, walls, hedges, etc.

<sup>207</sup> Field notes, 12.03.2020.

<sup>208</sup> Manzi 2020: 36.

<sup>209</sup> Jamieson 1841: 20; Dictionaries of the Scots Language (no date).

<sup>210</sup> Donati 2019: 121.

to roam their allotted woodland freely, rooting the floors, and serving as “forestry managers.” When the trailer arrived, however, it brought not three but six pigs, including a young male. Despite this unexpected turn of events, the first year with the pigs went as planned, and they did indeed not breed – the young male did not have reproductive access to the females as long as the infertile alpha led the herd. However, as Louise told me about her husband: “Paul is just so incredibly broody! He can’t stand it when anything doesn’t breed!” Wanting to see things grow and evolve, Paul decided to shoot the alpha, who they had found to be displaying aggressive and troublesome behaviour, and allow the young male to climb the social pig ladder. And it worked: the next year they had piglets. In no time, the boar population had grown to an extent that they had to start “farming” them.<sup>211</sup> The boars, who had been brought as forestry managers now needed to be managed for the sake of the forest. As the herd outgrew the land at Bamff, pigs started occasionally defying the fence, in which case they were “quickly dispatched” by neighbours or Bamff residents. At this time, the Ramsays established a modestly successful meat business, which, despite its popularity ultimately proved to be uneconomic, as the cost of feed and the maintenance of the fences could not be offset by the value of the meat they sold. A neighbour took over the herd for a while, believing he could make it profitable, until the fence got damaged by storm and a group of seven pigs escaped onto a nearby hill, while the Ramsays were away abroad. Some of the escapees, which had been overlooked in the aftermath managed to establish a new breeding group on a nearby hillside managed by Forest & Land Scotland, where they were eventually shot out. Subsequently, the requisite license for keeping the animals was not renewed and the licensing authority required their removal. Left behind at Bamff is a useless fence, still standing strong as if to mock the failed borders of belonging the pigs so defiantly transgressed.

In her analysis of more-than-human conviviality, Maya Manzi writes that the connections between multispecies actants that bring to effect conviviality, “although conceived on a more horizontal plane, also involve processes of inclusion and exclusion, through different degrees of disconnection.”<sup>212</sup> Despite the ethical principles on which they are built, convivial relations are not always symmetrical.<sup>213</sup> At Bamff,

<sup>211</sup> Louise’s phrasing.

<sup>212</sup> Manzi 2020: 36.

<sup>213</sup> Writing about convivial farming, Kelly Donati has furthermore argued that there are economic barriers to convivial lifeways. At the chicken farm she researches, care and conviviality have a calculatable price that makes them exclusive consumables for wealthier, conscionable customers (Donati 2019). Rewilding is similarly often financed through the development of exclusive industries, such as high-end luxury tourism. The convivial ways of living that rewilding projects pursue can still be entangled in unequal capitalist relations and do not necessarily challenge all structural inequality. Manzi writes that conviviality “conveys a sense of community, solidarity and cooperation that seems to go against the individuality that constitutes the core logic of capitalism. However, conviviality and affect are also fundamental ingredients for capital accumulation” (2020: 34). A future study could address whether, or how more-than-humans serve as labour forces in the pursuit of “healthier” futures.

the relationship between humans and wild pigs is highly unequal: The rewilders determine boundaries – both literal and metaphoric – within which the pigs can move freely and act agentively. Once the boars become almarks, however, and transgress these boundaries they are stripped of their rights and status as Bamff residents. This is not because the Ramsays are displeased by the pigs’ activities but because the wildness of the boars makes it difficult for them to live well with their neighbours. Their ethics of conviviality is necessarily subdued to the wider social and legal rules of Scottish society. The failed boar reintroduction raises the question “whether (or perhaps when) too much autonomy for nature creates problems for people.”<sup>214</sup> At Bamff, the situation caused a clear “tension of priority,” where the Ramsays’ notion of boar autonomy (including the freedom to move and to reproduce) could not fit into the physical and social context of their initiative.<sup>215</sup> As the pigs show, the convivial spaces created through rewilding can be limited and limiting, and the careful construct collapses quickly once more-than-humans’ agentive actions transgress the boundaries within which rewilding projects operate. Thus, the dream of a convivial, balanced ecosystem consisting of free and fulfilled agents finds its limits here.

## Temporalities of Care

The unruly almark are not the only parameters complicating the convivial futures my collaborators are envisioning.<sup>216</sup> Rather, the convivial regimes of care that both initiatives are trying to develop are interwoven with diverse temporalities that rewilders need to navigate to meet their ends – and this requires some temporal flexibility.<sup>217</sup>

Over the course of a couple of weeks in winter, the CLL volunteers aim to plant one thousand trees<sup>218</sup> There is pressure on the volunteers to work quickly, everyone is trying to be as fast as possible. On our breaks we discuss tricks to speed up the process even further: Is it easier to thread the plastic guards onto the poles before hammering them into the ground or after? Is working in teams faster or slower? The focus on efficiency is not informed by a lack of interest or care. The volunteer team is trying to be fast because there is so much work to be done and time is limited: tree planting, as well as other tasks such as tree felling, is a seasonal job that should be done in winter, when trees are dormant and can be handled with minimal damage to the saplings. Winter is also the time when many of the trees’ biosocial links to other species are less prevalent, contrasting for instance spring when they play a part

<sup>214</sup> Wynne-Jones et al. 2020: 98.

<sup>215</sup> Ibid.

<sup>216</sup> The section title is borrowed from a workshop by the Conservation And/As Care (ConsCare) Network that I participated in (January 2022).

<sup>217</sup> Prior & Brady 2017.

<sup>218</sup> Section title borrowed from a workshop by the ConsCare Network I participated in (January 2022).

in other critters' reproductive seasons as habitat and as food. It might be tempting to think of care as slowing down, taking in, building individual relationships, "making kin."<sup>219</sup> However, care also adheres to and draws on diverse temporalities. When caring for trees, it is essential to take into consideration the temporal cycles of the plants and of their biosocial relations, even if this means being able to make less time for individuals plants.

These more-than-human temporalities are not the only temporal factors that structure practices of care in rewilding [Figure 8 & Box 1]. During my research, CLL is in a phase of intense activity. Their funding is limited to four years, and within that time they want to achieve as much as possible in terms of environmental and community transformation. This poses an issue, as the initiative's lifetime does not align with the timeframes of care that are required for the projects they are setting up. For instance, the trees we plant in plastic guards will need to stay in their protective shields for at least three years. This time is needed for them to grow strong and tall enough to survive grazing pressure from herbivores. However, at the time we are planting our one thousand trees, the project has less than three years of remaining funding time. This means that, unless the local community gets organized and continues the work independently (which is one of Scott's goals), the tree guards will likely stay in the forest. During our volunteer sessions, we sometimes remove such left-over tree guards from earlier planting sites. Judging by the size of the trees that grow in them, many have been there for ten or fifteen years. While some of the trees flourish (those older tree guards have a zipper-like mechanism to help trees shed the plastic), many are deformed, or have died off entirely. Often, they have slick moss or algae growing on softened bark, because too much moisture is held in by the tight plastic wrapping. Some saplings never developed at all – their green plastic tubes stand in the forest as empty visions of failed futures. All the while, harmful microplastics are washed into the soil, further jeopardizing the well-intended act of care that first assembled objects and plants in the scenery.<sup>220</sup>

CLL, and the predecessors who emplaced the tree guards some fifteen years ago, are subjected to the *temporalities of the project form*. Andrew Graan has coined the concept of the project form to address how social endeavours are structured and performed through the organisational category of the project.<sup>221</sup> This is the case, he suggests, both logistically, as well as in terms of the visionary ends they pursue. Amongst the factors that set projects apart from other forms of tasking are the "distinct temporalities" that they manifest: "[Projects] are future oriented and temporary and they partition time, via schedules and deadlines, to regiment progress toward desired ends."<sup>222</sup> They underlie particular temporal governances that might

<sup>219</sup> Haraway 2016.

<sup>220</sup> Chau et al. 2021.

<sup>221</sup> Graan (*forthcoming*). I am grateful to Andrew Graan for discussing his early thoughts on the temporalities of the project form with me at a conference in 2019, and for sharing his pre-print manuscript with me.

<sup>222</sup> Graan (*forthcoming*): 3.

demand scheduled completions of tasks, deliverables, or other tokens of progress. In the case of CLL, these temporalities are also hugely shaped by the dependency on funding, which is usually granted in blocks of three to five years only.

Though a defining characteristic of the project form is its fixation on goals, the example of CLL shows that a project's temporalities might in fact stand in the way of achieving the ends it pursues. Afforestation projects are oftentimes seen as short-term events: although fully matured native forests take decades to grow, the investment of care is oftentimes only designated to the planting phase. Yet, trees can suffer greatly if the guards aren't removed, as they restrict their growth and pollute the soil around them. The temporalities of the project form make invisible these long-term needs for care, or – as in the case with CLL – delegate responsibilities of long-term care to others (i.e. the local community, or future rewilding projects).

Although the future visions CLL pursues are radically challenging modernist dichotomic thinking, its modes of futuring are restricted by the project form. Whilst the volunteers and organizers attempt to tailor their practices of care towards the temporalities of the more-than-humans they work with, the timeframe of the project's funding sets strict boundaries to their efforts. Even if the volunteers and other locals decided to continue meeting regularly after the project ends, they will be lacking important resources currently provided by CLL, such as tools, access to council infrastructures, and – perhaps most importantly – the van that is used to transport people, objects, and plants around the Cumbernauld area.

## **Conclusion: Caring for Beasts in the Anthropocenes**

Sara Asu Schroer and colleagues write that “caring is always, unavoidably, a work of worlding: a practice that [...] carries worlds with it.”<sup>223</sup> In this chapter, I have detailed the techniques and technologies of care that my collaborators utilize in order to bring about more convivial future worlds. At Bamff, such futures of multispecies liveability are envisioned in form of sharing the land with local critters, and this is organised in part through the reintroduction of beasts like beavers. At Cumbernauld, rewilders are seeking to give their new town a new urban wild by creating habitat for other species (for instance through planting native forests) and by establishing tighter links between human and more-than-human inhabitants of the area. Though the settings of the two projects are drastically different, both pursue futures of multispecies conviviality, the possibility of shared liveability for a multitude of species and ecosystems in which humans are active participants rather than external spectators or occasional visitors. The modes of futuring through which they are hoping to bring this about are diverse and demand various skills and knowledges: caring for future forests, for instance, requires an intimate knowledge of the needs and vulnerabilities of young trees. Or, as in the case of the community tree planting

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<sup>223</sup> Schroer et al. 2021 (np).

event in Cumbernauld, people may recruit convivial technologies such as phone apps in order to facilitate relations of care between humans and trees. However, conviviality can also require personal sacrifices: living together with an agentive other means giving up some of the anthropocentric privilege to decide over every aspect of a landscape. Furthermore, convivial futuring might be restricted by the temporalities of the structural contexts of the rewilding, such as the “project form” in the case of CLL.

Even though my collaborators are willing to give up much for their convivial principles, there are limits: as the example of the wild pigs has shown, care is oftentimes deeply entangled with control. How do rewilders negotiate their convivial ethics with narratives of urgency of the Anthropocene? What happens to those whose temporalities are not considered to resonate with the polyphonic assemblages of native ecosystems, or who clash with emerging temporalities of care? The next chapter will turn towards “care’s darker side: its lack of innocence and the violence committed in its name.”<sup>224</sup>

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<sup>224</sup> Martin et al. 2015: 3.

In winter we plant one thousand trees within a few weeks. The volunteer team needs to be fast and efficient with this task: tree planting (like other tasks, such as tree felling) is a seasonal job. Trees are dormant over the winter months, which means transporting and planting them then minimizes the risk of damaging the saplings. Another reason is that during spring and summer, trees are more likely to play a central role in the reproductive seasons of other species. When caring for trees, it is essential to take into consideration the temporal cycles of the plants themselves, as well as of their biosocial relations.



### SEASONALITY

Saplings are sheltered using light green plastic guards. Plastic is the only material available to the volunteers that will stand the wet Scottish weather. The guards will not decompose but stay in the landscape until someone returns and takes care of them. Scottish landscapes are clustered with old tree guards – some stand empty, some have old trees in them that have grown deformed because of the plastic's restrictive form. But plastic does decay: as long as the tree guards stay in the landscape, microplastic particles are washed into the soil.



### DURABILITY



### DECAY



### GROWTH

Native forests take decades to mature in Scotland. It will be at least three years until the saplings have grown tall and strong enough to survive without the plastic guards.

By the time the trees are ready to lose their guards, the funding for the volunteer project will have run out. Even if the volunteers decide to continue caring for the sites after the project ends – as is the hope of the volunteer coordinators – they will be lacking important resources such as tools, access to council infrastructure, and the project's van.



### ASYNCHRONICITY

Over centuries, landowners have attempted to boost deer numbers, as they are a favoured game species. Now, ecologists have identified an overpopulation of deer in Scotland. Part of this history is also the extirpation of large predators, who competed in the hunting of deer. With large population numbers and limited population control, deer and tree temporalities are out of sync: Deer reproduce too quickly, trees cannot keep up. Deer overgraze on tree saplings, and forests cannot rejuvenate. Many deer starve to death over the winter months. The plastic tree guards protect the saplings from being grazed on.



**Box 1:**

Temporalities of Care. Using empirical material and photographs I took in the field, this graphic describes interlinked practices, subjects, and temporalities of care that unfold around tree planting activities. Temporally charged terms (seasonality, growth, decay, asynchronicity, durability) are intended to draw attention to the diverse temporalities that complicate this task. The graphic is inspired by Dréano and Rudolfi's (2020) rough time words, as well as by Gan's (2021) stimulation on visualizing more-than-human temporalities.

(This graphic was first developed for a workshop by the "Conservation and/as Care Network" and will appear in our forthcoming zine "Temporalities of Care.")



**Chapter 3 – ALIENS  
The Chrononecropolitics  
of Rewilding**



*Figure 9: Stags in the Highlands  
(photograph by author).*



## Chapter 3 – ALIENS

### The Chrononecropolitics of Rewilding

Fieldnotes  
Cumbernauld, 04.12.2019

*“Is this a friend or a foe?”, Niamh shouts over to Scott, who is hammering a peg into the ground a few meters along. He clammers through the brush and along the ridge that we are working on to investigate the plant Niamh is pointing at. It is small and leafless, easily mistaken for a dead stick poking out of the soil. “That’s a friend, we want to protect that one.”, he replies. Niamh goes to task, takes one of the decomposable mats and, using pegs and a hammer, staples it to the ground around the sapling to protect it from predation and to keep it from being shaded out by competing plants.*

...

Fieldnotes  
Cumbernauld, 19.02.2020

*“NO!”, I hear Scott shout somewhere nearby. Confused I look around, until I finally spot him behind a pile of felled Sitka spruce trees. We’ve been spending all*

*day cutting our way through the dense thicket of young Sitka and larch trees that have sprung up on the council-managed woodland [Figure 10]. The traces of our labour are unmissable: gigantic piles of chopped up trees line the individual tunnels each of us has cut into the thick wall of conifers. “What happened?”, I ask Scott. “I accidentally felled a Scots Pine sapling!”, he laments. He had mistaken the young plant for a Sitka Spruce, noticing the misidentification only after he had made the deadly cut. The sapling is discarded onto the pile with the other chopped trees, but guilt and grief continue to mark Scott’s face.*



*Figure 10: Protected and felled trees in Cumbernauld (photograph by author).*

Death, oftentimes, is described as “the great equalizer” that dissolves all worldly divisions.<sup>225</sup> Yet, as is evident in the two vignettes above, grave differences exist between the ways in which lives and deaths are witnessed, rationalized, and enacted in rewilding settings – while some species or individuals are seen as meriting care and protection, others are considered to be problematic and are removed. During my research with the Cumbernauld Living Landscape (CLL) project, much of the volunteer activities consist of planting and of felling trees. Which treatment a plant receives follows a seemingly simple rule that divides more-than-humans into the categories “native” and “invasive alien.” Or, as Niamh calls them jokingly, “friends” and “foes.” In the second vignette, Scott cuts down a tree sapling of the wrong species – a friend – and is plagued by guilt. All the while, dozens of dead “invasive” tree saplings pile up next to him. Scots pine and Sitka spruce saplings look similar, so that even for a trained biologist like Scott it is easy to confuse them in a moment of inattention. Both are coniferous trees with thin, spikey saplings, and the dead Scots pine vanishes quickly in the pile of its cousins.

<sup>225</sup> The phrase is attributed to Susanna Moodie, who wrote in 1853 that all humans “share a common destiny (...) the good and the bad, the clean and the unclean (...) will die” (quoted in Carr 2016).

The stark contrast between the mundanity of the felling of “invasive” plant species, such as Sitka spruce (*Picea sitchensis*) and larch (*Larix* spp.), and the shock over the accidental killing of a treasured native Scots pine (*Pinus sylvestris*) shows that there is a particular set of ethics at work in this field. While felling trees, I began to realize that, in their pursuit of convivial futures, many of the techniques that rewilders use in fact revolve around the administration of death. In this chapter, I will look at the interrelations between care and control in rewilding, and the roles that death and dying play therein. How are decisions over life and death negotiated? What happens when, in the attempt to find ways of living and dying well, not everyone’s lives are equally grievable? While the previous chapter has focussed predominately on the positive aspects of care, this chapter looks at the other sides of care. Focussing on the deaths that, unlike the ghosts of the first chapter are not grieved, I will explore how some species come to be more “killable” than others. The first part of this chapter will introduce some aliens and invaders of the Scottish rewilding landscape and describe some of the concepts’ political dimensions. I will then line out two ways in which I consider the lack of grievability of some deaths to be related to temporality: firstly, I will argue that “killability” should be considered within its historicity.<sup>226</sup> Which deaths are conceived as negative and which are not emerges out of particular histories that continue to shape relations between humans and other species, and that are closely interlinked with sovereign rights to govern landscapes. Secondly, I will argue that some of those who are treated as “killable” are temporally disjunct. They are out of sync – they are *broken clocks*. Both these dimensions are part of what I call the “chrononecropolitics” of rewilding, the politics and temporalities that regulate the occurrence of death and dying.

### Alien Invasion: Categorizations of More-Than-Human Lives

Ghosts are not the only monstrous creatures that roam Scottish landscapes. They share their stage with *aliens*. Failing the evocative term, these aliens are not of the monstrous “mean-green-mother-from-outer-space”-type alien plants such as Audrey II from the musical “Little Shop of Horrors,” who lives of the blood of her caretaker and eats abusive boyfriends. Our aliens are common animals and plants – not quite as exciting, though perhaps similarly conflicting. “Alien” is one of the official terms used in ecology and in policy to describe species that are “not native.” The Scottish Parliament Information Centre (SPICe) defines alien / non-native species as “any species of plant or animal that survives outside of its historical or natural range as a result of human activity.”<sup>227</sup> As such, it is in its essence a temporal quality, one that assigns “a ‘natural’ and proper place and time to people or species and [negotiates] what forms of mobility are deemed legitimate or ‘natural’.”<sup>228</sup>

<sup>226</sup> I am borrowing the notion of “grievability” of deaths from feminist philosopher Judith Butler (2009).

<sup>227</sup> SPICe Briefing 2010: 4.

<sup>228</sup> Marten 2020: 58.

Though the SPICe definition might appear neutral, the labelling of species as “native” and “alien” has moral implications. This begins with the term itself: Derived from the Latin word “*alius*,” meaning “other,” alien species are quite literally *othered*, *made other* through human categorizations. The concept of othering was coined by postcolonial thinker Gayatri Spivak in order to address the ways in which hegemonial powers are maintained through practices of exclusion and subjugation.<sup>229</sup> It has since been extended to analyse European and colonial perspectives on more-than-human lifeforms.<sup>230</sup> Despite attempts to create counternarratives to the otherness of more-than-humans, the idea of the monstrous Other lives on through terminology such as “alien species” that carry in them implications of non-belonging.<sup>231</sup>

This negative connotation is corroborated by another attribute often used in conjunction with aliens, which is “*invasive*.” The divisions between alien and invasive species are fluent and often cause debate. Whereas “alien” is equated to “non-native,” invasive species are commonly considered to be those who are disruptive to native species or habitats. Or, as geographer Charles Warren phrased it, “species behaving badly.”<sup>232</sup> Aliens are not always automatically invasive but can become “acclimatized” or even “naturalized” if they know how to behave. Whereas “aliens” leaves some space for imagination, the category “invasive” states a clear threat. Combined, “invasive aliens” (or “alien invasion”) is not something that is easy to approach with an open mind - it sounds like nothing but trouble.

The categories of native, alien, and invasive species can be seen as attempts to order what has been mixed through millennia of human movement, colonization, and cultivation. Human-organized travel never transports only ticket-holding passengers and logged goods. Intentionally or not, other lifeforms have always travelled with humans in luggage, in ballast waters, or directly through our bodies.<sup>233</sup> With growing geographical interconnectedness and increased movement across the planet, the dispersal of “invasives” has similarly intensified as all sorts of creatures are expanding their ranges.<sup>234</sup>

While many aliens have been introduced unintentionally, some were brought in on purpose. In 19<sup>th</sup> century Europe, this occurred largely through acclimatization societies; groups that petitioned for the introduction of certain species to their countries.<sup>235</sup> Acclimatization societies were meeting points for a diverse mix-

<sup>229</sup> Spivak 1985.

<sup>230</sup> For instance, Borkfelt 2011.

<sup>231</sup> The term “more-than-human” used throughout this text is one attempt to criticize anthropocentric exceptionalism and the othering of different lifeforms. It was introduced by philosopher David Abram (1996) and has become a common term within anthropology in an attempt to move away from nature-culture dichotomies.

<sup>232</sup> Warren 2007: 429.

<sup>233</sup> Jaric et al. 2020: 346–347. A particularly grim example are the smallpox viruses and other deadly microbes that were spread across the Americas with European colonization (Bol 2011 [np]).

<sup>234</sup> Carlton 2011: [np].

<sup>235</sup> Lever 2011 [np].



ture of upper-class individuals – aristocrats, scientists, landowners, etc. – united by a common interest in the importation of foreign species. Their motivations were commonly the pursuit of aesthetic, economic, political, or entertainment purposes, ranging from the desire for more productive food sources to the hunting of exotic game as luxury entertainment.<sup>236</sup> In 1860, a local branch was formed in Glasgow but was dissolved soon after in 1868, having failed to gain sufficient scientific, governmental, and public support due to its focus on upper class interests and lack of informed introduction goals.<sup>237</sup>

Despite the only marginal success Victorian acclimatization societies had in Scotland, their consequences can be felt until this day: one of the species brought in by these groups is for instance the Eastern grey squirrel (*Sciurus carolinensis*) that was first introduced to the UK from North America in 1876.<sup>238</sup> After several introductions into British parks, the critters rapidly spread across the country. Today, they are amongst the most common mammals one can encounter in urban spaces. Walking through my local green space, Queens Park in the South of Glasgow, I see dozens of them every day. Often, they come close to people sitting on the grass on a summer day, allegedly attempting to steal food from unsuspecting park visitors. Sometimes, they are accused of aggressive behavioural traits, fuelled in part by their lack of shyness, as well as the misinformed belief that they kill the rare native red



Figure 11: Sign at Glasgow botanic gardens showing a grey squirrel with monstrous teeth, warning that they bite (photograph by Seán Mainwaring).



Figure 12: Red squirrel at feeding station near Loch Eck (photograph by author).

<sup>236</sup> A craze for exotic game was sparked after eland (*Taurotragus oryx*) from the local zoo was served at a meeting of the London Acclimatization Society in 1860 (Lever 2011).

<sup>237</sup> Borowy 2011: 157.

<sup>238</sup> Usher et al. 1992: 109. Coates 2012: 5. Ritvo 2017: 173.

squirrels (*Sciurus vulgaris*) [Figures 11 & 12].<sup>239</sup> Taking the opposition against greys to the extreme, an article by the tabloid newspaper Daily Mail refers to grey squirrels as “a brutish, raucous North American import,” adding that “there is something demonic in the grey squirrel’s DNA. [...] Grey squirrels are tree rats, no more, no less. They spread disease, they kill red squirrels, they nick my peaches and kill my trees — it’s time we took up arms.”<sup>240</sup> This hostile framing of grey squirrels exemplifies how the distinction between native and alien/invasive species can serve a moralizing function. Historian Harriet Ritvo argues that an investigation of such “morally loaded rhetoric” is worthwhile, as it might guide us to think more constructively about environmental change, wherein “the proliferation of introduced species is a symptom rather than a cause.”<sup>241</sup> In the search for causes, the greys’ introduction story can serve as a reminder of how colonial regimes and upper-class interests shape Scottienvvironments until this day.

### Care and Control: A Violent Side to Rewilding?

Fuelled by anxieties over current mass extinction events, the increased spread of some species is causing fear of an environmental homogenization and the emergence of a “Homogocene,” in which only generalists can survive.<sup>242</sup> Whereas Victorian elites introductions provided a tool to tailor the national landscape to their interests, rewilding advocates now fear their consequences could eliminate what makes Scottish landscapes unique to them: particular assemblages of native species and tasksapes. My collaborators mostly treat invasive aliens as an antonym to native species, and in particular to native keystones. Whereas native keystones are protected, invasive aliens are controlled. As the second opening vignette describes, the CLL volunteer team spends weeks in winter cutting their way through a patch of densely grown invasive Sitka spruce (*Picea sitchensis*) and larch trees (*Larix* spp.).<sup>243</sup> In between the conifers, we sometimes find native trees that were planted there a decade or longer ago, still in their green planting guards. This is always cause for celebration, as we feel like we’re slowly “freeing” them from the invaders.

<sup>239</sup> Red squirrels are a threatened species in Scotland and often serve as a charismatic umbrella species for conservation movements. They are indeed threatened through grey squirrels, but not because of violent behaviour: Grey squirrels carry the Parapoxvirus, which does not affect them but can be deadly for red squirrels. Greys furthermore outcompete reds in the collection of nuts and berries, which puts additional pressure on their weakened populations.

<sup>240</sup> Rantzen 2006 for the Daily Mail.

<sup>241</sup> Ritvo 2017: 173.

<sup>242</sup> Warren 2007: 428.

<sup>243</sup> Though both trees are alien species, having been brought to Scotland as plantation crops, some argue that Larch trees, which were introduced over 400 years ago have by now become “naturalized” as they are popular with some native wildlife species (Borland 2014 for Highland Titles).

At Bamff, people also fight alien invader. Environmental groups regularly come to remove rhododendron, an alien who has spread into most of Scotland's forests.<sup>244</sup> Its evergreen leaves sting out amongst the barren winter trees, and its big blossoms bring colour at unfamiliar times throughout the year.<sup>245</sup> Its flowers are among the reasons of the rhododendron's success in Scotland: as popular garden plants, many individuals and councils plant them outdoors, from where they spread through parks and into forests.<sup>246</sup> Critical of this aesthetic choice, the government agency for Scottish national land and forests writes about rhododendron: "Don't be fooled by its beautiful flowers... rhododendron is Scotland's most threatening invasive non-native plant."<sup>247</sup> They go on to describe their fight against the alien:

"In 2010, we set out our vision to remove rhododendron from Scotland's national forests and land. We estimated that nearly 50,000 hectares of the land we manage was affected, and calculated it would take £15.5m and ten years to eradicate. Since then, we've been using chainsaws, herbicides, heavy machinery and considerable human muscle power in the battle against this unwelcome alien."<sup>248</sup>

If we put aside for one moment the reasons that motivate the removal of plants such as rhododendron, statements like the above make visible a particular kind of violence inherent in the treatment of alien and invasive species. The engagement with the "unwelcome alien" is called a "battle," to which tremendous resources (financial and temporal) and a whole lot of powerful weapons are dedicated. Rhododendron, like the grey squirrel, emerges as inherently *killable* in these scenarios: they are the targets of warfare, and their death is the ultimate goal. Feminist scholar Judith Butler coined the term "grievability" to think through the differential treatment of human deaths in war settings.<sup>249</sup> Butler argues that a framing of people as more or less human is required to produce deaths that are more or less *grievable*, and thereby easier or harder to justify or allow to happen. In a similar vein, Donna Haraway questions "who lives and dies and how" in a multispecies context, interrogating how animals can be *made killable* in certain settings like animal shelters.<sup>250</sup> In the previous chapter, I have described how the two rewilding initiatives pursue a convivial

<sup>244</sup> Ironically, the beavers have taken to one of the pondside rhododendrons and built a lodge underneath it. This is the only of the plants that will be allowed to stay in the long run.

<sup>245</sup> Not dissimilar from Linnaeus' floral time-telling designs, Corroul Estate maintains an old rhododendron garden with 350 different species, a different one of which blooms each month of the year (Rausing 2018: 117).

<sup>246</sup> At Bamff, rhododendron was cultivated as cover for another alien species, pheasants (*Phasianus colchicus*), which are a popular game bird in Scotland. Pheasants are bred and released for shooting seasonally, though many end up as roadkill because of their poor survival skills and lack of adaptation to the Scottish environment.

<sup>247</sup> Forestry and Land Scotland 2020.

<sup>248</sup> *Ibid.*

<sup>249</sup> Butler 2009.

<sup>250</sup> Haraway 2008: 38.

ethics through their futuring endeavours. Yet, as can be seen in the examples here, this is not applied to all living things equally but instead involves “contradictory positions held in tension: living well, on the one hand, and killing, on the other.”<sup>251</sup>

But of course, there *are* reasons for all of this, and that is to care for native ecosystems. Within conservation ontologies, native species must be protected because they serve the local ecosystem best, and invasives need to be controlled because they get in the way of it (which is what qualifies them as invasive species in first place). Care and control, thereby, become inseparably entangled. They constitute what van Dooren calls “regimes of violent care:” logics and practices of violence that have become an inherent part of environmental care.<sup>252</sup> Despite its convivial ethics, rewilding is heavily invested in such regimes of violent care, including the methodical elimination of alien and invasive species [Box 2 & Figure 14].<sup>253</sup>

Yet, as I learned during my research the separation of desired and undesired species is not as clear-cut as it might first appear: Much of my fieldwork with CLL is spent planting native tree saplings and cutting back invasive ones. At first, this seems simple: birch, oak, hazel, and hawthorn are “friends,” Sitka spruce, rhododendron, and dogwood are “foes.”

That is until I come across a social media post by CLL, in which they share an event by another local conservation group. This second group is looking for volunteers to help remove “*invasive* birch trees” from the edge of a bog near Cumbernauld. The same charity with whom I had planted hundreds of *native* birch trees was encouraging people to remove *invasive* birch trees only a few miles away from our previous planting site. Confused, I bring this up during my next visit to Cumbernauld and am explained that the birches are encroaching onto a peat bog. The young trees are threatening to drain the bog of its water, which would lead to the destruction of valuable insect habitat and to the release of vast amounts of carbon into the atmosphere that are currently stored in the bog.<sup>254</sup> Hence, and despite being a native species, whose growth is encouraged elsewhere and who receives care from rewilding

<sup>251</sup> Donati 2019: 126.

<sup>252</sup> Van Dooren 2014: 92.

<sup>253</sup> The use of violence towards invasive aliens for the protection of natives has been under scrutiny by some conservationists and academics, who have formed a movement for “compassionate conservationists” (Centre for Compassionate Conservation University of Technology, Sydney. 2019.). They have for instance argued against the common practice of mass-culling invasives to protect native species (Wallach et al. 2015). While it is fiercely debated whether or not a compassionate conservation approach is in actuality more compassionate, or maybe even more damaging and deadly than the practices it challenges (see for instance Hayward et al. 2019.), it is useful in its denaturalization of “killing for conservation” (Wallach et al. 2015: 1481). I would like to emphasize that my aim is not to make moral judgements about the violent aspects of rewilding, which I see as ethically complex and context-dependent. Instead, I am simply interested in the processes and practices that make tolerable, ignorable, or even invisible the utilization of more-than-human death and killing.

<sup>254</sup> Peat bogs have been found to store more carbon than forests, which has triggered an increased focus on wetland protection and restoration in Scotland.

workers through planting, seed distribution, and protection, the birches moving onto the new habitat need to be controlled. The reaction to their unruly movement shows that invasive and native are ambiguous categories, flexible parts of an organizational system that assigns qualities of belonging and non-belonging to more-than-humans. Even individuals belonging to a native species can become categorized as invasive if their behaviour clashes with human prioritizations of protection and narratives of environmental health. This underlines the non-scalability of these terms, whose definitions contrast crassly in different countries. In settler colonies such as Brazil or Australia, native species are for instance commonly considered those who had been present before first European arrivals.<sup>255</sup> In the Scottish context, however, “native” usually refers to species having arrived without human support around the end of the last ice age, twelve-thousand years ago [Figure 13].<sup>256</sup> The differences in these definitions, and their temporal arbitrariness, show that these concepts are not only instable and relative, but also tinted by global political dynamics.<sup>257</sup>

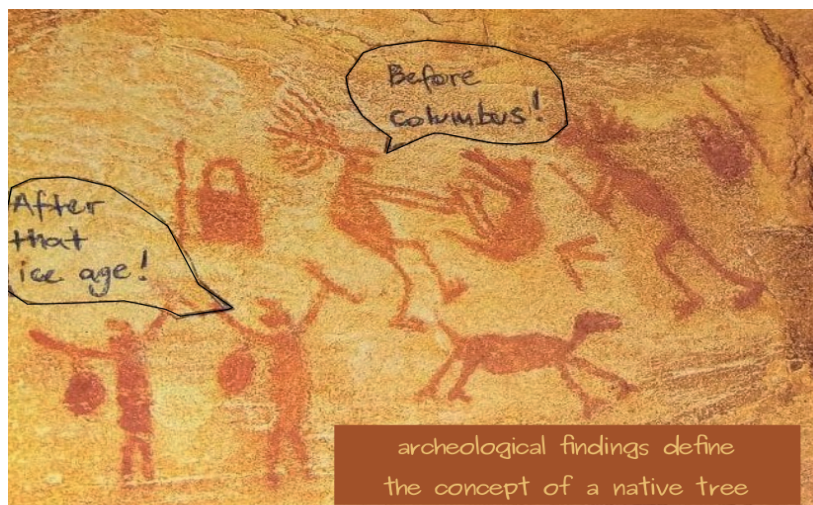


Figure 13: Native tree times. Anthropologist Mariana Cruz A. Lima made this collage after our conversation about the different temporal reference points that define native / alien species in our fields. Mariana works with landless communities' reforestation projects in the Brazilian Northeast, where these categoriations are tied to colonial timelines. My collaborators commonly use the end of the last ice age as their reference, because these timeframes are considered large enough to allow evolutionary processes to develop. Image by courtesy of the artist.

<sup>255</sup> Van Dooren 2011: 289. As lined out in the introduction, this shows once more how concepts of “nature” are defined by colonialism. It is the European / settler gaze that defines what belongs, as if the land hadn't had a history before colonization.

<sup>256</sup> Warren 2007: 428.; This definition was largely shared by my collaborators.

<sup>257</sup> Both terms also show a troubling resemblance with racist, anti-migrant discourses (Marten 2020).

What emerges from these stories is that “care is non-innocent.”<sup>258</sup> Rather, it “is a form of more-than-human biopolitics, privileging the maintenance of certain lives over others.” Within its “violent logics of biopower,” “some lives [are] sacred while others are rendered killable.”<sup>259</sup> The concept of biopower stems from the work of philosopher Michel Foucault, who coined the term to contrast a historical sovereign right to “*take life or let live*” with the state’s “power to *foster life or disallow* it to the point of death.”<sup>260</sup> Foucault used the term to analyse how bodies are socially constituted in ways that make them governable for political and economic gains. The processes through which biopower is exerted constitute “biopolitics,” describing the ways in which governing regimes exact control over, and bio-physically shape populations. The concept has been adapted to multispecies research and studies on conservation work. Christine Biermann and Robert Andersson argue for instance that “conservation is itself biopolitical, inasmuch as it is a project of governing both non-human and human life.”<sup>261</sup> Studying the techniques of such governance sheds light on the values and agendas that inform conservation work, and the knowledges it produces. They expand that “even as many conservation interventions are scientifically informed and technically derived, they are also value-laden projects in which particular human subjects decide who or what is made to live and who or what is allowed to die.”<sup>262</sup> This is the function of the paradigms of native, alien, and invasive species in rewilding that are used to describe qualities of belonging or dis-belonging in more-than-humans, and that consequentially determine over life and death. They are scientifically informed, which allows for them to be rendered as ethically “neutral.” Thereby, they work to normalize practices of care and control in rewilding, masking the ethical ambiguities of their use of death and killing.

Though much can be said about the biopolitics of rewilding, the concept alone does not offer the right tools to adequately discuss the central role of killing and death this chapter is set out to explore. In a spin on Foucault’s biopower, Achille Mbembe coined the term “necropower” (“death-power”) to challenge the violence of colonial regimes.<sup>263</sup> He writes:

“One could summarize [...] what Michel Foucault meant by *biopower* [as] that domain of life over which power has taken control. But under what practical conditions is the right to kill, to allow to live, or to expose to death exercised? Who is the subject of this right? [...] Imagining politics as a form

<sup>258</sup> Reisman 2021: 401.

<sup>259</sup> Johnson 2015: 297.

<sup>260</sup> Foucault 1978: 139; original emphasis. Or, “to make live and let die” (Margulies 2019: 151).

<sup>261</sup> Biermann & Andersson 2017:3.

<sup>262</sup> Ibid.

<sup>263</sup> Mbembe 2003: 22.

of war, we must ask: What place is given to life, death, and the human body (in particular the wounded or slain body)? How are they inscribed in the order of power?"<sup>264</sup>

Arguing that biopower is an insufficient concept on its own to account for the power implicated in death and killing, Mbembe thus uses the concepts of "necropower" and "necropolitics" to describe the "subjugation of life to the power of death."<sup>265</sup> Whereas biopower rather passively describes the "disallowing" of life, necropower addresses the active pursuit or management of death.

While Mbembe's work focusses on humans in contexts of colonial regimes, the necropolitical relations he describes are transferrable to more-than-human contexts.<sup>266</sup> But although death has been widely addressed as a part of conservation biopolitics, the "role of the active making of death that occurs alongside biopolitics as distinct from the processes of 'letting die'" remains undertheorized.<sup>267</sup> In the following sections, I will analyse the role of death-making in rewilding through a necropolitical lens, turning a focus to "the actpolitical processes of death as necessary for the maintenance of other kinds of life under particular political regimes."<sup>268</sup> More specifically, I will explore the temporal aspects of rewilding necropolitics, firstly, by turning towards the historicity of killability.

## Historicity of Killability

Shortly after its fiftieth anniversary in 2014, the Scottish Wildlife Trust (SWT), one of Scotland's biggest conservation charities, published a document titled "50 for the Future."<sup>269</sup> This document maps out fifty steps to take in the next fifty years in order to "protect and restore Scotland's natural environment for future generations." Flicking through the colourful pages, one finds amongst the demands ambitious goals of societal change, such as "Transforming our understanding of waste and move to a true circular economy" (40), or to "Eliminate demand for unsustainably sourced seafood" (30). Above all this, however, the first point on the top of the list reads: "Reduce wild deer densities substantially to allow the widespread recovery of natural woodland and scrub." By this is meant the mass culling of deer, around 100 000 of which are annually shot in Scotland.<sup>270</sup> How did deer make it onto the top of this list in such a deadly manner?

<sup>264</sup> *Ibid.*: 12 (original emphasis).

<sup>265</sup> *Ibid.*: 39–40. Mbembe uses his concept to describe the colonial imposition of an unliveable life onto the colonized, which renders them as "living dead."

<sup>266</sup> For instance, Jarzebowska 2018; Groeneveld 2014.

<sup>267</sup> Margulies 2019: 151.

<sup>268</sup> *Ibid.*: 151–152.

<sup>269</sup> Scottish Wildlife Trust 2014.

<sup>270</sup> Scottish Government 2020.



Box 2: Interlude: Techniques of killing.  
Cumbernauld, 26.02.2020

*Our job today is to cut down invasive dogwood scrubs, easily identified by the red branches, and pile them up by size (twigs versus strong branches and stems). Later, we turn them into “dead hedges,” for which the cut down matter is piled up on a bunch of Y-shaped branches to prevent it from touching the ground [Figure 14]. That is important because dogwood branches re-sprout when touching soil, so we can’t just leave the felled plants as a habitat pile as we would with other species. The constructions have to face South, so that the sun dries them out quickly and fungi won’t start growing on them. Duncan, the reserve manager will later come around and inject herbicide into the remaining roots of the felled plants to kill them off.*

Building the floating dead hedges is laborious: You need to find the right branches to serve as a structure onto which all the remaining plant matter is then woven in a tight and stable cocoon. Up to the positioning of the construction, every detail of the process has been tailored to the qualities of this plant – an elaborate ritual of killing. But controlling the dogwood is simultaneously a technique of care that will allow other plants to flourish. At our site, the dogwood grows out of a forest and onto a meadow. In spring, this meadow will be turned into a wildflower field that will serve as habitat and a food source for pollinators and other native critters.



Figure 14: Dogwood in dead hedges, Cumbernauld (photograph by author).



His statement reflects a common opinion in Scottish conservation circles, where healthier future ecologies are thought to be dependent on the mass culling of deer.<sup>273</sup> Controlling deer populations, thus, is understood to be an act of care for the environment and for the future, and an urgent one on top of that. Following Russell's suggestion, let's take a glance at the history of the matter to understand how and why care has become so deadly for deer in Scottish conservation settings.

### The Fall and Rise of the Deer

The starting point of this story can be set at different points in history. For us it will be around the late 1600s, when the last Scottish wolves were killed. With the disappearance of wolves from Scottish landscapes, the last nonhuman predator of deer vanished; in fact, one of the reasons for the persecution of wolves was their competition as predators.<sup>274</sup> As described in chapter 1, many rewilders identify this event as a tragic moment of loss, a turning point for Scottish biodiversity that crucially shapes today's ecosystems.

Perhaps the defeat of the wolves convinced landowners of the safety of the Highlands when they chose to move people out and sheep in during the years following the failed Jacobite Rebellion of 1745–6, a period that has since become known as the Highland Clearances.<sup>275</sup> Fire and blades were the tools that made the land uninhabitable for humans, but that produced favourable grazing grounds for hardy sheep – at the cost of many of the remaining Highland woods, already strongly compromised through a history of human exploitation.<sup>276</sup> Additionally, the timber demands of the budding Industrial Revolution put increasing pressure onto forests. Subsequently, forestation reached its all-time low in the mid-1700s, covering only 4% of Scotland.<sup>277</sup> Together with the number of trees also fell the numbers of deer

<sup>273</sup> Headlines from the UK's major news outlets include titles such as "Deer 'pose biggest threat' to Scotland's native woodlands" (Miller 2014 BBC), "Scotland's deer population 'should be cut'" (BBC 2020), and "Huge rise in Scotland's deer cull needed to protect land, says report" (Carrell 2020A Guardian).

<sup>274</sup> Wiseman 2012: 29.

<sup>275</sup> Hayman 2010: 39. Two central functions of the Clearances were to uproot the militant Scottish clan system and to turn the Highlands into a more lucrative source of income for landlords, displacing in the process most of the local community (Toogood 2003: 155). The Clearances remain a traumatic and controversial history in Scotland – so much so, that a contemporary Glasgow pub decided to dedicate sections of their toilets to historical figures who were instrumental in the events, so that their customers can "piss on them" (Saunders & Crilley 2019: 446). The plaque installed in the pub reads: "This urinal is dedicated to three men who participated in the Highland Clearances. These men took part in what is now recognised as a Central Government endorsed ethnic cleansing. Through their greed and bigotry, they and others have been instrumental in destroying a centuries old Scottish Highland way of life. Please feel free to pay them the respect they are due" (Ibid. 463).

<sup>276</sup> One of the methods of culling wolves was to burn down the forests they inhabited (Wiseman 2012: 32).

<sup>277</sup> Brown et al. 2011: 292

until they had become extirpated from all but Northern Scotland by the end of the 18<sup>th</sup> century.<sup>278</sup> To survive, the woodland creatures had to learn to adapt to the open hills.

Sheep farming did not prove itself to be economically feasible for long. With a change in markets and new, cheap imports from New Zealand, the worth of wool and mutton dropped drastically within a century.<sup>279</sup> With it, the cost of land sank too. During this same period, the mid-1800s, the weight of the industrial revolution was beginning to be felt even by wealthy, Southern elites. Like the North American quest for the final frontier, a yearning for a remaining site of mystery and wildness, untamed by the grinding forces of the ever-growing industrial machine spread through the privileged urban communities of the UK.<sup>280</sup> The now sparsely populated Scottish hills, where Mary Shelly had first begun to envision her techno-monstrous interrogation of the human condition (“Frankenstein; or, The Modern Prometheus”) only some thirty-five years before, offered themselves as this site.<sup>281</sup> The works of Sir Walter Scott with their romantic vision of the wild Highlands became hugely popular across the UK around that time.<sup>282</sup> Queen Victoria too must have felt the pull of the North. It was her establishment of a summer home at Balmoral castle in Aberdeenshire that triggered a literal run for the hills amongst her wealthy compatriots. Cheap land, improving infrastructure, the dreadful and mysterious, and the royal – combined, these qualities became the context for the “Balmoralization” of the Highlands, the appropriation of a romanticized imaginary of Scottish culture and nature as an escapism for Southern elites.<sup>283</sup> Only about a century after the Highland Clearances, during which landowners had decided to replace rural communities with sheep, the Highlands were now reframed as an empty wilderness.<sup>284</sup> This wilderness was to be used as a site of recreation for wealthy elites, who turned their properties into “sporting estates” for fishing and hunting. Red deer were amongst the most favoured game for blood sports, and so landscapes were reshaped to facilitate the making and taking of their lives. Between 1790 and 1842, the number of deer forests in Scotland rose from nine to forty, and then to 213 in 1912.<sup>285</sup> Betraying their name, deer forests are not wooded areas but rather the grounds dedicated to the hunting of deer.<sup>286</sup> Usually treeless moors and barren mountainsides, they are lands on which it is easy to detect and shoot deer from afar.

<sup>278</sup> Scottish Deer Working Group 2020: 30.

<sup>279</sup> Hobbs 2009: 2859.

<sup>280</sup> Cronon notes about the hunt for the final frontier that “the very men who most benefited from urban-industrial capitalism were among those who believed they must escape its debilitating effects” (Cronon 1996 [1995]:14).

<sup>281</sup> Spark 1987: 17.

<sup>282</sup> R. Butler 1975: 72.

<sup>283</sup> Toogood 2003: 156.

<sup>284</sup> Hobbs 2009: 2860.

<sup>285</sup> Ormond, 2005:15; Scottish Deer Working Group 2020: 231.

<sup>286</sup> H. Lorimer 2000: 404.

To maintain their industries, estate owners were interested in raising deer numbers to increase the chances of successful hunting. For this end, many estate keepers until today feed deer over winter and seldomly shoot females, especially not during the breeding season.<sup>287</sup> Their management practices allowed deer populations to slowly stabilize, though their geographical distribution remained limited for some time.<sup>288</sup> All the while, sheep grazing, deer forests, muir burns, and continued logging for timber kept woodlands to remnant areas.<sup>289</sup>

A- and reforestation efforts picked up in the 1950s, after the two world wars had depleted the UK's timber resources. With the increase in forestation, albeit plantation woods, deer numbers boomed, and they spread South again. In the decades since, their population sizes have grown exponentially, which has become an increasing point of conflict amongst different interest groups. From near extinction, deer numbers in Scotland have now bounced up to an estimated one million in 2020.<sup>290</sup>

### **Aristocrats, Prime Ministers, and Sheikhs of the Glens**

The increased importance of deer stalking as a status symbol can be seen not only in the increased number of deer forests but is also reflected in the cultural representations of the Highlands. "The Monarch of the Glen" (1851) is the name of a famous painting by English artist Sir Edwin Landseer. It depicts a mighty royal stag atop a wind torn mountain.<sup>291</sup> Behind him, a dramatic landscape unfolds: a steep valley filled with white clouds, set against the dark, rocky flanks of distant hill chains. The stag's head is turned towards the sun, an alert but calm expression on his face. His raised chin and authoritative posture indicate that he, too, considers himself to be the monarch of the glen. The painting has been adopted as an iconic symbol of Scottishness, a visualization of the wild Highlands imaginary. It is hard to overstate the cultural and political importance of the painting. The National Galleries of Scotland (NGS) praised "Landseer's superb vision of the nobility of the Highland stag, and of the Highlands as a wilderness," which allowed him to create "a hugely powerful image, and one which still resonates in perceptions of Scotland today."<sup>292</sup> As "the ultimate biscuit tin image of Scotland," it has appeared on the packaging of typical Scottish products such as whisky and shortbread.<sup>293</sup> The importance of the painting was underlined in 2016, when the company owning the artwork announced

<sup>287</sup> MacMillan & Leitch 2008: 476.

<sup>288</sup> Scottish Deer Working Group 2020: 30.

<sup>289</sup> Which shows that fewer deer numbers do not necessarily lead to more forests.

<sup>290</sup> Carrell 2020(A) for The Guardian.

<sup>291</sup> As critics have pointed out, the stag's antlers have twelve tips, which technically classifies him as a "royal stag" rather than a "monarch stag," as the painting's title indicates. For this, sixteen tips would be necessary (BBC Scotland 2018).

<sup>292</sup> Quoted in BBC 2016.

<sup>293</sup> Jeffrey 2005 for The Herald.

their intention to sell it internationally. Within few months, the NGS managed to fundraise £4m and buy the Monarch, which is now on permanent display in Edinburgh.<sup>294</sup>

Despite the public effort to keep the Monarch in Scotland, the painting is rather controversial. In a perhaps more ambivalent statement, an NGS spokesperson called the piece “an important Victorian picture that has taken on various layers of meaning, which include its use in advertising and as a Romantic emblem of the Highlands of Scotland.”<sup>295</sup> The statement could be interpreted as a reference to Scotland’s Balmoralization, in which the Monarch serves as the perfect packaging for the “wild Highlands” ready to be claimed by wealthy deer stalkers. This would be not an unfounded critique, as until this day land ownership in Scotland is highly unbalanced. Roughly “400 owners are estimated to control half of all Scotland’s privately owned land,” making it “one of the most concentrated ownership patterns in the world.”<sup>296</sup> A 2014 report for the Scottish government calculates that “this means that half of a fundamental resource for the country is owned by 0.008% of the population,” concluding that “as a measure of inequality in a modern democracy, this is exceptional and is in need of explanation.”<sup>297</sup> Not accounted for in this statistic is that much of this land is not owned by the local population at all, with the current largest landowners being the Danish billionaires Anders and Anne Polvsen, followed soon by the Vice President and Prime Minister of the United Arab Emirates and ruler of the Emirate of Dubai, Sheikh Mohammed bin Rashid al-Maktoum, and the English Church as the largest private forestry holder.<sup>298</sup>

The disparity in land ownership becomes particularly clear in the distribution of sporting estates, a privilege reserved for the very wealthy. Sporting estates are expensive to upkeep and rarely turn a profit. It is not a hope for financial gain but access to stalking grounds and social status that tend to motivate landowners to keep hunting estates.<sup>299</sup> A Scottish saying goes, “you don’t get rich from owning a deer forest; you own a deer forest because you are rich.”<sup>300</sup> Deer stalking is thus a controversial topic, strongly associated with wealthy elites, who use their hunting grounds to pursue their desires for (natural and cultural) wilderness.<sup>301</sup>

<sup>294</sup> BBC 2017.

<sup>295</sup> Ibid.

<sup>296</sup> Ross 2020 for The Press and Journal.

<sup>297</sup> Scottish Government 2014.

<sup>298</sup> Carrell 2019 for The Guardian; Ross 2020 for The Press and Journal.

<sup>299</sup> MacMillan & Leitch 2008: 477.

<sup>300</sup> Flynn 2018 for The Guardian.

<sup>301</sup> Several recent campaigns have attempted to change the system of landownership in Scotland, petitioning for policy change and a return of land to local communities. A report from the Scottish Land Commission (2019) for instance found that Scottish land should be owned by a greater number of people. An often-favoured option is an increase in community buyouts, where local communities become the shared owners of land or infrastructures. 2020 saw a successful crowdfunded community buyout of a large property, part of the Langholm Moor previously owned by the dukes of Buccleuch (Carrell 2020(B) for The Guardian).

Criticizing the history of the expropriation of the Highlands, Scottish writer James Robertson says about the Monarch of the Glen:

“Is it a redundant image? As an emblem of this country or of the Highlands, yes. It suggests that Scotland is empty, untamed and the playground of royalty and aristocratic huntsmen. It does have a contemporary value, however: it tells us so much about how a certain kind of Victorian perceived Scotland, and this is historically and culturally important. The stag has a supercilious curl on its lip - a bit too anthropomorphic for my taste. In the 1980s for one of the covers of the magazine *Radical Scotland* we superimposed the head of Margaret Thatcher on the Monarch - I think the superciliousness carried over pretty well!”<sup>302</sup>

The face of the former Prime Minister, who remains a hugely unpopular figure in Scotland until this day, imposed onto the iconic painting is a highly evocative image. It aligns Thatcher with the wealthy Southern elites that have used Scotland as a resource exploitable for their purposes.<sup>303</sup> Another interpretation might allude to that, just as the stag is considered killable prey by the stalker, Thatcher’s death would not be a cause to grieve. And indeed, I clearly remember her death in 2013, when I attended High School in rural Scotland. In the week of Thatcher’s death, a campaign surged social media, succeeding in making the song “Ding-Dong! The Witch Is Dead” from the 1939 film “*The Wizard of Oz*” a number one hit in the Scottish charts.<sup>304</sup> In a foreshadowing of this macabre response, the cover art of the journal might be seen as a visual commentary on the interweaving of power, wealth, and (ungrievable) death in the making of Scottish landscapes.

### **Werewolves and Werelynx: How to Kill a Deer**

As if the problem with deer and Scottish landscapes was not complicated enough, rewilding adds further difficulties to the equation. When I started my field research in late 2019, deer populations had recovered so successfully from their near extinction that ecologists now believe there exists an overpopulation of deer in Scotland. Their overgrazing on tree saplings is considered a core factor inhibiting the regeneration of native woodlands. And this brings us back to the beginning of this story, in which the mass culling of deer has been placed first on a list of urgent conservation points. Within rewilding projects, where the objective is to let “nature take care of itself,” the necessity for such population control rarely questioned.<sup>305</sup> Most rewilding projects continue to cull deer, and many even offer stalking tourism. The

<sup>302</sup> In Jeffrey 2005 for *The Herald*.

<sup>303</sup> In her push for the UK’s neoliberalization, Thatcher infamously scrapped many social campaigns such as the distribution of free milk in schools. This earned her the nickname “Maggie Thatcher, milk snatcher.”

<sup>304</sup> Official Charts 2021.

<sup>305</sup> Rewilding Europe 2021.

distribution of land ownership in Scotland means that several rewilding projects occur on former sporting estates, whose owners are investing in reforestation and re-introductions, while also catering to a luxury nature tourism industry. This had led to a peculiar situation, where one can be an environmentalist tourist shooting deer at a former sporting estate, which is now dedicated to rewilding. The Ramsays at Bamff do not entertain commercial stalking but have an arrangement with a private group of deer stalkers, who pay them a small annual sum of money and venison. At Corroul Estate, however, one can still book a stalking holiday. In fact, the estate states that their successful reduction in deer density has allowed the animals on their property to grow larger, thus increasing their economic value and the prestige that comes with shooting them. In the context of rewilding, the heroic image of the deer stalker as conquering the Monarch of the Glen has been partially reincarnated as the protector of the last native woodlands.

Curiously, and even though some estates and their visitors seem to have transitioned seamlessly from one kind of deer shooting to another, the core opposition to the mass culling of deer for conservation comes from within the deer stalking community. Deer are situated within conflicting ontologies: To deer stalkers, they are a prey species, and their abundance is generally seen something desirable, a qualifier of a “hunters’ paradise.”<sup>306</sup> To rewilders, they are also a prey species, but foremost to extirpated predators such as wolves and lynx. They are a link in a broken trophic chain, and their overpopulation is seen as a problem that needs to be solved urgently. Though the engagement of both communities with deer is similar – through shooting them – the ways in which they believe this should occur differ drastically. Many rewilders criticize that stalking estates keep deer numbers high intentionally, and that shooting them serves as a form of entertainment. But there has also been an ardent critique from stalkers about the ways in which culls for conservation are performed: In 2004, for instance, controversy erupted after a video of a cull at Glenfeshie Estate was leaked, one of the Polvsens’ rewilding properties in Scotland. To the offense of traditional deer stalkers, they used a helicopter to fly their hunters over the glens and shoot large quantities of deer from the air.<sup>307</sup> Culling in this way was perceived as unethical “carnage” and “bloodshed,” traumatizing both deer and stalkers, and causing unnecessary suffering to the animals.<sup>308</sup> Dozens of stalkers and gamekeepers protested the ongoing culls in the following weeks.

It has been pointed out by defendants of mass culls that sporting estates and their affiliates have quite high stakes in this debate: it is in their interest to keep deer populations large for their hunting tourism and to maintain the economic value of their properties, which is calculated in part by the number of stags on the land.<sup>309</sup> Death, in this context, is a resource that can be used to upkeep or disrupt hegemo-

<sup>306</sup> Leopold 1988[1949]: 2.

<sup>307</sup> Davidson 2017 for *The Scottish Farmer*.

<sup>308</sup> *The Scotsman* 2004.

<sup>309</sup> Flynn 2018 for *The Guardian*.

nial systems of power.<sup>310</sup> The stalking community's critique of rewilders' methods of killing deer could be interpreted as a mere resistance to the threat it poses to their wealth and cultural prestige.<sup>311</sup> Though this likely contributes to the strong opposition to the mass culling at Glenfeshie, part of the gamekeepers' critique may be founded in a deep discomfort with the axenic techniques of killing, which remove all history, heritage, and personal investment (for example having to crawl through mud, endure weather and hill, etc.) from the act of killing. The defiance of the deer stalkers further highlights the historicity of the killability of deer: to them, the mass culling of deer might symbolize a loss of traditional cultural heritage, including particular moral values attached to killing in the "right way."<sup>312</sup> To rewilders, the killing of deer might in turn symbolize the opposite: the undoing of a history of privileging the entertainment of the wealthy over the wellbeing of the environment.<sup>313</sup> In this sense, the conflict over the killing of deer is quintessentially necropolitical. The questions at its core regard who should possess the power to bring death upon the more-than-human other, and how death should be performed. Mbembe writes that necropower is a tool in producing the sovereign and the right to govern.<sup>314</sup> In Scotland, the right to determine the fate of deer is inseparable from the right to define the purpose of landscapes. The struggle over the ethics of killing deer can thus be seen as a struggle over necropower and the associated governance over the futures of Scottish landscapes.

Notably, the mass culling of deer is not part of the long-term visions of rewilders, and some are already seeking alternatives: The Arran rangers have for instance commissioned a miles long fence to encircle Glen Rosa, preventing deer from entering. In fact, a big fence separates the entire island, restricting the deer to one side. Yet, the fence does not fully solve the problem of deer and forests: Due to overpopulation and lack of woodlands, mass-starvations have occurred multiple years in the recent past. For this reason, it has been calculated that the island can support a maximum of two-thousand deer. Based on this, estates, community, and land managers calculate how many deer to cull each year. At Glen Rosa, the hope is to be able to herd the deer out of the territory before closing the fence – any remaining ones will have to be culled to allow the trees to restore. Even for those seeking alternative methods, the killing of deer thus stays an unavoidable part of rewilding.

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<sup>310</sup> Arnar Árnason writes about death as a resource in the context of organ donations that "make bad deaths good" (2017: 50). Its purpose as a resource is similarly what distinguished a "good" from a "bad" deer death to stalking estates, though notably, other factors including the suffering of animals can also play a role.

<sup>311</sup> Hobbs 2009: 2861.

<sup>312</sup> The Scotsman 2004.

<sup>313</sup> Though, as I have described previously, some rewilding estates still profit from the killing of deer as sport.

<sup>314</sup> Mbembe 2003.

The problematic is summed up by one of my interviewees: “The biggest challenge is that, although people are trying to fix little things, perhaps even believe in self-governing ecosystems and stepping back, we cannot get full trophic cascades without top predators.”<sup>315</sup> Mammalian predation, the more-than-human enactment of death upon others, is lacking in Scottish ecosystems. Thus, as I have been told repeatedly during my research, in absence of other predators “humans must be the wolves” and cover for their missing tasks.<sup>316</sup> Deer, as the prey of these missing predators have death by hunting written into their very nature. This story essentially features a “conveyor belt approach to culling in which changes brought about by attempts to remove one species inevitably lead to results that are—at least for some people.”<sup>317</sup> On this conveyor belt, control is repackaged as care, and the bodies of deer become the stages on which this care is being performed. The metaphor of humans slipping into the skin of predators serves as a strategy to further naturalize the deaths of the deer, rendering them ungrievable.<sup>318</sup>

The story of deer demonstrates how struggles over power and land have fabricated conservation regimes that require killing for care. Just as “invasive aliens” are killable subjects because of their *lack* of history in a particular place, the killability of deer emerges from particular necropolitical histories of landownership and environmental management, and must therefore be considered within its historicity.

## Desynchronized Clocks

“The fundamental condition of our planet is deep rhythmicity,” writes chronobiologist Barbara Helm.<sup>319</sup> Every being is invested with temporalities beating to its own (though interdependent) times.<sup>320</sup> Yet, as humans are changing the fundamental conditions of life on this planet, many of these rhythms and their interspecies synchronicities are “at risk.”<sup>321</sup>

<sup>315</sup> Lisbet Rausing, interview 25.02.2020.

<sup>316</sup> This doesn't only happen in form of killing: A particularly creative group of rewilders organized a team of volunteers who roam the countryside in the North of Scotland at night, howling like wolves. By imitating wolves' sonic tasks of transspecies communication, the volunteers hope to influence the grazing behaviour of deer. The fear of predators, they anticipate, will lead the deer to move more and browse trees only lightly rather than overgrazing on plants beyond the hope of recovery. (From conversation with anthropologist Andrew Whitehouse).

<sup>317</sup> Van Dooren 2011: 291.

<sup>318</sup> Biermann & Anderson 2017: 4. This invites an interrogation whether more-than-humans may be seen as invested with necropower, as their modes of killing set the parameters for rewilders' approaches to death.

<sup>319</sup> Helm 2021: 59.

<sup>320</sup> Bastian 2017.

<sup>321</sup> Funch 2017: M143, using the example of the precarious interrelations between red knot migration times and horseshoe crab reproductive seasons. Kevin Birth similarly emphasizes that, as polyrhythms have become troubled, problematic arrhythmias are coming into existence (Birth 2012: 123).



The stories of two species who were introduced to the UK around the same time, but who feature striking differences in their temporalities exemplify how (disturbed) rhythmicities stand in relations to killability: The little owl (*Athene noctua*) is an example of a naturalized alien. The small bird was introduced to the UK by naturalist Charles Waterton in 1843, who brought five fledglings from Italy to England to keep them as predators controlling the critters feasting on his garden.<sup>322</sup> Unsurprisingly, the little owls did not care much for Waterton's plans and quickly left his property. However, the owls struggled to become established in the UK, and it was only after several other Englishmen imported little owls over the following decades that a breeding population became established. Although they gradually spread across the country, their numbers always remained relatively low. Little owls only arrived in Scotland in the 1950s, and up to this day number at no more than fifty breeding pairs. Studies by the Royal Society for the Protection of Birds (RSPB) indicate that population numbers across the UK have been declining since 1995, which has led to some conservation efforts of the species.<sup>323</sup>

Just over a decade before Waterton brought the little owls to England, the first Sitka spruce trees (*Picea sitchensis*) found their roots tangled in Scottish soils in 1831, where they were planted as plantation crop.<sup>324</sup> Sitka spruce is a coniferous, evergreen tree that is native to North America. Its fast growth and its adaptability to poor soils make it a profitable crop, and it currently makes up about half of all trees in commercial British forests.<sup>325</sup> While Sitkas are not generally considered invasive aliens within their plantations, they can become categorized as such if they encroach upon undesignated territories. At CLL, much of our activities throughout winter consisted of felling Sitka spruce that grew in what was supposed to be a native woodland. The young trees were seeded by a couple of mature trees that were planted on the hill in front of the city when it was first constructed in the 1950s. Their purpose was to serve as a sound shield protecting Cumbernauld from the noise of a nearby motorway. Left unchecked on council-owned land, they reproduced incredibly successfully, creating a dense thicket of saplings along the glen. Because local insects, fungi, and microbes are not well equipped to break down their organic matter, the ground where they grow is covered in thick layers of dry, brown needles, so not much else can grow there.

What sets apart the two aliens? Why is the little owl on the agenda of bird protection NGOs, whereas Sitkas are being felled by rewilding initiatives? There are many factors that influence the differential treatment of the two species, such as their perceived charisma or their economic function.<sup>326</sup> What I want to draw atten-

<sup>322</sup> UK Little Owl Project 2021.

<sup>323</sup> Royal Society for the Protection of Birds 2021.

<sup>324</sup> Woodland Trust 2021.

<sup>325</sup> Forestry and Land Scotland 2021.

<sup>326</sup> Jaric et al. 2020. It might also seem unfair to compare the treatment of plants and animals so directly. Clearly, there exists a taxonomic bias which makes it easier for many people to kill plants than animals. That being said, multiple campaigns for the culling of invasive animal

tion to, however, is their divergent temporalities: while the little owls have been slow spreaders, which barely maintain stable populations, the Sitkas have been incredibly speedy. They are *too fast* in their reproduction and growth; so fast, that other species cannot keep up. In Cumbernauld, the Sitkas grow so quickly that hardly any other plants can compete with them, essentially creating an unplanned monoculture that slowly spreads from the roots of their alien parents. Deer are similarly temporally disrupted: without wolves and other predators as their rhythmic partners, they are no longer *in time* with others in their surroundings. The extirpation of wolves has led to “a desynchronization of the centuries-old knots of life that were bonded out of the mutual existence of different agents.”<sup>327</sup> Deer’s reproductive cycles are too fast, their lives too long to function well in the current ecosystems. They are *out of sync*, and this causes trouble.

Let us rewind to Michelle Bastian’s critical horology from the introduction of this book. Bastian argues that all things may be considered clocks that function within their own temporal logics.<sup>328</sup> The ticking of these clocks respond to each other in what Anna Ting calls “polyphonic assemblages,” multi-rhythmic amalgamations of ways of being that sometimes concord and sometimes discord with one another. The aliens and invasives that are rendered killable, I argue, are “broken clocks” that have fallen (or always have been) out of sync with the polyphonic assemblages they exist within.<sup>329</sup> Rewilding, then, functions as a set of practices that attempt to *remake* particular polyphonic assemblages by *resetting clocks* – or, by taking out broken ones. *Rewilding is clock-making, and rewilders are clockmakers*. Paul Huebener writes that, “like it or not, we are all clockmakers faced with the task of rebuilding our knowledge of natural time, a prospect simultaneously terrifying and exhilarating.”<sup>330</sup> This is to say that, intentionally or not, everyone is involved in the making and shaping of times. Rewilders are thus not the only clockmakers, but rewilding does invite particular kinds of clockmaking. As seen in the first chapter, this includes becoming attuned to the ticking of absent clocks, that nonetheless continues to shape the entangling and unravelling of lives.<sup>331</sup> Similarly, the resetting of some clocks that are “behaving badly” is an essential part of much rewilding work.<sup>332</sup> Culling deer can be seen as messing with deer clocks in an attempt to slow down their impact on their environments. One Facebook user wrote about the Scottish Highlands in a public rewilding group “[...] All they need is one simple action: reduce deer numbers.

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species exist in Scotland too, most notable against the grey squirrel (*Sciurus carolinensis*) and the American mink (*Mustela vison*).

<sup>327</sup> Batalla 2021: 130.

<sup>328</sup> Bastian 2016: 12.

<sup>329</sup> Huebener 2020.

<sup>330</sup> *Ibid.*: 4.

<sup>331</sup> Arguably, more-than-humans can also be seen as clockmakers, as their tasking shapes the temporalities of the landscapes they dwell in, or are absent from.

<sup>332</sup> Warren 2007: 429.

Everything else will happen in its own time.”<sup>333</sup> Deer are framed here as an obstacle to the “right” unfolding of time itself. Their sped-up ticking is disorienting the timing of others, who will regain their pace once the clockmakers have adjusted the faulty gears. The same can be said for the other killables we have encountered above, who are out of sync with the chaotic times of the Anthropocene.

The clocks made through rewilding can be disagreeable and may be seen as out of sync by others. Sitkas, for instance, can be considered great clocks, perfectly in sync with capitalist production times. Likewise, the rhododendron’s evergreen leaves might be the ideal vessel for somebody’s prioritized garden times. At CLL, there was some push back to our tree felling, which may be seen as a conflict over Sitka clocks. Some local residents wanted the Sitkas to remain on the hillside, because they enjoyed their green colour in winter. In their opinion, the temporality of the Sitkas, who do not bow to the seasons by shedding their needles, is an aesthetic asset that brightens up the grey Scottish winters. Sitkas might not work well with “wild,” native clocks but they can still be beautiful clocks in the eyes of some. Correspondingly, the clocks made through rewilding can be as ethically and aesthetically troublesome to people as the broken wild clocks are to rewilders.

## Conclusion: The Chrononecropolitics of Rewilding

Despite the convivial ethics that many rewilding initiatives envision, those involved with rewilding often find themselves performing actions of violent care that compromise life and bring death.<sup>334</sup> To make these actions possible requires those at the receiving end – alien and invasive species – to be rendered killable. While *ghosts* are marked by a kind of *hyper-belonging*, and their absences are cause for grief, invasives and aliens are defined by a quintessential *non-belonging*, their deaths are largely un-grievable. They are out of time and out of place.<sup>335</sup> Whereas in the previous chapter I have described the convivial aspiration of rewilding, I have here addressed how care is nonetheless entangled with control: caring for forests, for instance, means controlling deer using lethal methods. The deadly practices of rewilding that are born from this interrelation, and the processes that produce killability in a species constitute the *necropolitics of rewilding*.

Researching the ways in which time and temporality factor into biopolitical governance, Dana Luciano has developed the notion of “chronobiopolitics” to address the unique intersections between time and the making of bodies.<sup>336</sup> Mirroring her neologism, what I have described in this chapter may be seen as a study of *chrononecropolitics*. Just like chronobiopolitics describe the temporalities of the governance of bodily lives, chrononecropolitics describe the temporal dimensions of the powers

<sup>333</sup> Facebook 2020.

<sup>334</sup> Van Dooren 2014: 92.

<sup>335</sup> Marten 2020: 58.

<sup>336</sup> Luciano 2007; see also Freeman 2010.

and politics that administer and execute death and dying. Studying chrononecropolitics holds analytical potential, as it draws attention to the understudied connections between temporality and death, showing how they are implicated in wider societal issues and the extent to which they shape biosocial engagements, such as the practices of care in conservation work. I have exemplified this throughout this chapter by focussing on the ways in which the convivial ethics of rewilding is inseparable from its chrononecropolitics. I have shown two ways in which the killability of a species can be a temporal condition: Using the example of deer, I have argued that killability is product of historical and political processes, and thus needs to be considered in its historicity. Secondly, the temporalities of aliens and invasives furthermore matter as they are also *out of sync* with their environments. In its attempt to mitigate the consequences of their arrhythmias, rewilding is a process of clockmaking that draws on all sorts of timing practices, amongst them the administration of death.

There are further dimensions to the chrononecropolitics of rewilding that I have not explored here yet. One example has been laid out in a blog post by George Monbiot, titled “In Defence of Speciesism.” Monbiot reports on being confronted about his support of culling deer by an animal rights activist after giving a talk.<sup>337</sup> The activist challenged Monbiot’s defence of and participation in deer culling, arguing his privileging of some lives over the deer’s made him a speciesist. Without denying it, Monbiot defends his choice by arguing that without culling, many deer would starve to death each winter. Since humans control most environmental resources, these deaths, too, would be our fault. A fast death through the barrel is thus the more ethical option in his opinion, enough to justify the corresponding shortening of life. This argumentation is profoundly chrononecropolitical, as temporality – a fast (and definite) death versus a (potential and) slow death – is the defining factor that determines the ethics and rules of bringing death.

It will be down to future research to explore this and other dimensions of the chrononecropolitics of rewilding more in-depth. My hope is that a chrononecropolitical framework will shed some insight into the powers and politics of death and dying that people become entangled with on their search for better ways of living and dying well together.

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<sup>337</sup> Monbiot 2020.

Box 3: Interlude: Messy Landscapes, Messy Times.

This graphic [Figure 15] combines elements from several photographs I took in the field: a beaver dam, a barbed fence around a sheep enclosure, and a decaying metal gate. During my research I became interested in borders – physical and metaphorical – and how they are negotiated, enacted, and contested. Fences are borders, markers of enclosures – the historical antonym to the commons (Dunbar-Ortiz 2014: 34). At Bamff, one of my main tasks was to take down fences that will no longer be needed for Wildland.

Fences are also porous. Things can travel through them (living things, gazes, desires, imaginations). Fences are contact zones, dedicated spaces for encounters between unequal forces (Pratt 1992). Gates open and close the spaces enclosed by fences, integrating and separating them. They are mediators of the contact zone. Beaver dams are also porous borders, trying to enclose a segment of river to make a pool for their home. Enclosures can bring life.

Together with STS-artist Ross Dalziel (Cheapjack) and anthropologist-activist Mariana Cruz A. Lima I am thinking about the lumpy coalitions (Ross' term) that take shape when different entities gather to care for, about, or with others. Coalitions of people, more-than-humans, objects, landscapes, temporalities, ethics, categories, ... lumped together, making shapes, permeating borders. After a rich and messy discussion, Mariana deduced that "lumpy coalitions make messy landscapes." Beavers also make messy landscapes. They integrate sticks into the river, they carry out mud and rocks, they coppice trees and remake the times of growth.

Looking at porous borders and the actors and materials that are lumped together in their becoming can make us notice different temporalities: the making and breaking of enclosed spaces, the creation and decay of their barriers, the moments in history when borders are removed. Staying with the trouble is getting messy with times.

Ross, Mariana, and I worked using what Dréano and Rudolphi (2020) called "rough relationing" to put our empirical material into perspective and crystallize common vectors, some of which are featured in this graphic (lumpy coalitions, messy landscapes). Elements of this design were first developed for a workshop by the "Conservation and/as Care Network" and will appear in our forthcoming Zine "Temporalities of Care."



LUMPY

COALITIONS

make messy landscapes

messy times

POROUS  
BORDERS

DIS/INTEGRATION

*Figure 15: Messy Landscapes, Messy Times.*

## Conclusion

### Wild Times in the Anthropocenes

“Our zeitgeist is essentially hauntological,” writes philosopher Mark Fisher.<sup>338</sup> The world is haunted by events that never occurred, by “futures that failed to materialise and [remain] spectral.”<sup>339</sup> Rewilding landscapes are no exception. They, too, are haunted by that, which could have been, and by that, which once was. But this haunting can be productive: fruitful things can happen when pasts, presents, and futures collide, as ghosts, beasts, and aliens mingle in the landscape.

This study has presented research into the diverse times and temporalities, human and more-than-human, that shape Scottish rewilding endeavours. It has addressed the role that pasts play in rewilding: Rewilding advocates have argued that it is important to become familiar with more-than-human histories of ecosystems to counteract the “shifting baseline syndrome,” a collective forgetting that shapes perceptions of environmental health. And indeed, their engagement with rewilding has profoundly changed how my collaborators perceive the environment, as they have become increasingly sensitized towards the human and more-than-human tasks of daily life (for instance, trophic pursuits) that constitute landscapes. Tracing

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<sup>338</sup> Fisher 2014: 59.

<sup>339</sup> Ibid.

these tasks, they have developed “arts of noticing,” ways of engaging their senses to become more aware of the activities of other critters, as for example by learning how to track badgers and identify their paths, burrows, and latrines.

Importantly, not only those beings currently dwelling in the landscapes contribute to its becoming: As their perceptions of landscapes are changing with their increased understanding of more-than-human pasts, my collaborators are also developing a sensory awareness of the extinctions and absences that have an ongoing impact on the environment – I refer to these as “ghosts.” The barren hills of the Scottish Highlands, for instance, can be read as being haunted by wolves, whose absence is manifest in the transformation of the entire ecosystem. Where there could have been forests, there is now only bracken and heather. The absence of wolves becomes known through the absences of liveliness that they facilitate.

Getting to know this haunted Necrocene taskscape can bring with it the sensation of loss. In response to the absences they have learned to see around them, some of my collaborators have cultivated practices of mourning through performing acts of, and creating spaces for, grieving extinctions. This constitutes a political act of pan-temporal solidarity; a reaching into a past and an evocation of a future. But not everyone perceives the hauntings of past landscapes in the same way: Different ghosts tell different stories, and not all of them harmonize. Thinking about hauntings as vectors of different “throughscapes” can help with this, showing how different temporalities, rhythms, and storylines are layered through one another, partially overlapping but leading to different places.<sup>340</sup>

Studying rewilding landscapes holds much potential for the development of a critical study of time. This research has shown how landscapes are invested with diverse overlapping pasts that stakeholders learn to read in a multitude of ways. Researching the “ghosts” and their hauntings through which these pasts are known shows the affective powers that past beings continue to hold over landscapes and their dwellers, breaking up linear notions of time that draw distinct boundaries between a singular past and a singular present. Thereby, Scottish rewilding initiatives serve as valuable case studies that can help anthropologists to consider the pluralities of time and temporality.

Although it is difficult to overstate the importance that environmental pasts play in my field, to my collaborators, rewilding is at its core a future-oriented and hopeful practice, a pathway to more liveable worlds for all kinds of beasts. In spite of their drastically different contexts, both of the initiatives I worked with share a prevalent desire for futures of multispecies conviviality. For this reason, they have developed specific modes of futuring, consisting of techniques and technologies of care. For instance, caring for future forests involves an intimate process of planting saplings, which necessitates a physical knowledge of the plants’ needs. Fostering

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<sup>340</sup> Mathews 2018: 392.



community interest in and care for future forests, on the other hand, might require utilizing innovative technologies such as phone apps to facilitate long-term inter-species relations.

Several temporalities converge in these acts of care: care is for instance often seasonal, tied to the circannual rhythms of a species and their biosocial, temporal entanglements. Similarly, times of growth (of individuals or populations) need to be considered. But also infrastructural contexts matter: CLL, for instance, is restricted through the “temporalities of the project form,” which prevent it from acting out care within the necessary timeframes. Tree guards are likely to stay in the landscape, potentially restricting the saplings’ growth after some time, whilst damaging the soil through microplastics.

My collaborators’ visions of conviviality are furthermore complicated by the sometimes-troublesome agentive actions of more-than-humans. Their convivial ethics are rooted in an understanding that more-than-human agency should be supported and permitted to unfold freely. But the unruly Scottish beasts don’t always make things easy for rewilders, as they change what is held precious or transgress human boundaries. This demands a lot of commitment from rewilders, and the willingness to make personal sacrifices. For this to function there is a need for a flexible ontology of the future, which is open to being shaped by humans and more-than-humans alike. Yet, this openness is disrupted in some cases, when beastly rule breaking clashes with the logistics or ethical frameworks of rewilding projects. In this case, the removal or killing of the offender is commonly the solution.

The call to find more convivial futures echoes throughout academic-activist networks.<sup>341</sup> Part of a radical critique of the damaging human lifeways of the Anthropocenes includes creating counternarratives to futures as something to be shaped exclusively by humans. My research serves as an example of how some people are attempting to shed their anthropocentric foci and radically reimagine what worlds of collective multispecies liveability might look like. Thereby, this research contributes to an important body of work that critically analyses ethical perspectives on, and practical approaches to, the pursuit of more just futures, along with the contradictions and challenges this might bring.

Despite its convivial ethics, those involved with rewilding often find themselves caught in complex negotiations of care and control. These are caused by the difficult and sometimes paradoxical investment of rewilding projects in both an ethics of liberation from capitalist, anthropocentric governance of ecosystems, as well as in a narrative of ecological destruction (in part, through invasive aliens) in need of being mitigated. This demands the drawing of strict boundaries that determine who does and does not belong into “healthier” future ecologies, a necropolitical distinction that renders some species killable and ungrievable. What emerges can be described as regimes of violent care, which coordinate and govern more-than-human death.

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<sup>341</sup> For instance, the two Convivialist Manifestos.

How and to whom death is administered is intrinsically temporal: The killability of some species, like deer, arises out of specific histories that are entangled with other political struggles, such as over the governance of land. Scottish deer are rich in their symbolic capacity, which configures them as multiply killable: They have been cultivated as a prey species and status symbol for rich landowners, who keep entire estates dedicated to deer stalking. This has caused their populations to grow so drastically that their culling is now on the agenda of environmentalists too. Discussions about the killing of deer thus seldomly concern the necessity of killing itself, but rather *how* deer should be killed, and how many. Its historicity makes the killability of deer fundamentally chrononecropolitical.

The temporalities of aliens and invasives furthermore come to matter, as they are *out of sync* with their environments. They are broken clocks that disrupt environmental times. Sitka spruce, for instance, grow too fast and shade out other plants, deer reproduce too quickly and cannot be matched by their food sources. Rewilding, then, is a process of clockmaking, which draws on all sorts of deadly time-making practices, trying to remake particular times that tick together polyrhythmically.

The temporally informed politics of more-than-human death constitute what I have called the *chrononecropolitics* of rewilding. A chrononecropolitical lens, I suggest, can be useful in understanding the temporal dimensions that influence how conservation practices and other endeavours treat deaths variously, the powers that are contained within the governance of death, and the ethical decisions people make when engaging with other species. As such, it might contribute to future research on the temporalities that shape practices of death.

Increasingly, scholarly focus is turning towards the ways in which species are trying to make their lives in the changing worlds of the Anthropocenes.<sup>342</sup> The ethnographic material that I have discussed in this study speaks strongly to this topic. It offers an insight into the lived realities of some incarnations of the Anthropocenes, including its incoherences and frictions, what it means to a particular group of people, and how they are dealing with it. I believe that research of this kind is important because we are living in a changing world, in which insights into the lives of other beings are becoming increasingly vital. They can help us understand how we, as an animal species that is deeply entangled with the lives of other beings, can learn to extend practices of care towards more-than-human actors.

This research fits into the wider currents of multispecies ethnography, where more-than-humans are key figures in ethnographic research. It concurs with previous work that considers more-than-humans as agentic actors with the capacity to shape worlds. Furthermore, this research opposes modernist dichotomies that divide “nature” from “culture” by showing how humans and more-than-humans are equally entangled in the becoming of the landscape, even in highly managed and densely populated settings such as urban spaces.

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<sup>342</sup> Mathews 2018.

As I have furthermore argued throughout this writing, it is important to think about the temporalities that affect our world making endeavours, and that shape how species meet one another. In this, I follow Barbara Adam who believes that “rethinking environmental issues in temporal terms [...] gives us considerable theoretical and practical access to their complexity, which in turn provides the potential for alternative socio-environmental praxis.”<sup>343</sup>

Finally, this research adds to the growing body of literature on the notion of conviviality. As scholars and activists are actively petitioning for more convivial lifeways, I have contributed a critical gaze that analyses how conviviality can be interlinked with regimes of violent care. I suggest that, in particular a chrononecropolitical focus is necessary if we are to better understand the diverse impacts that our well-intended acts of care can have.

It is important to acknowledge that the more-than-human temporalities of rewilding landscapes require much broader research than the scope of this study permits. Rewilding offers a rich research subject, since those who are involved with in rewilding actively interrogate and reinvent their relations to the more-than-human worlds they inhabit. While I have approached the topic on a landscape-scale, this came at the cost of detail when it comes to the individual relations between humans and more-than-humans. The reintroduction story of beavers and the messy landscapes they make, for instance, or the movement for the return of wolves would have merited studies of this scope alone. Furthermore, I have not been able to offer a nuanced representation of stakeholders’ oppositions to rewilding, which is highly needed in the future in order to assure that rewilding can happen successfully and without further perpetuating social inequities.

Additionally, there is an infinite host of temporalities and rhythms worth investigating; my work has focussed on ideas of pasts, futures, and deaths, but other vectors could have for instance been concepts such as (de)growth and productivity, seasonal temporal patterns, or the quest for sustainability. Finally, although I have attempted to maintain a critical perspective by drawing links to the colonial legacies and capitalist factors, rewilding is entangled with, a more critical social discussion of rewilding is needed. Especially, an analysis that thinks through prevalent hetero-patriarchal elements in rewilding work, such as its top-down, predator-focussed ecological ontology would be highly beneficial.

Since its recent inception, rewilding has meant many things to many different people. It is thus impossible to make overarching generalisations about rewilding as a practice, or rewilders as a community. But in this multiplicity lies a strength of rewilding: As it is becoming an increasingly popular vessel for environmental action, rewilding makes it possible for everyone to contribute to the laying of new paths to wilder worlds. Although I have shed a critical light on the violent sides of rewilding, I nonetheless agree with my collaborators that, in the big picture, rewilding carries a hopeful message that can guide us to less anthropocentric, more convivial ways

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<sup>343</sup> Adam 1998: 19.

of living. Rewilding opens doors to pasts and futures alike, and invites a deeply imaginative engagement with the environment. Through it, we can perhaps begin to grasp the multiplicities of times and natures with which we are all entangled in a never-ending moment of becoming.



*Figure 16: Dark tunnel to the forest (photograph (edited) by author).*



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## Images

*(Some photographs by the author are colour and light edited).*

Figure 1: Entrance to the bunker in Andechs. Photograph by Barbara Helm.

Figure 2: Jumping red squirrel. Photograph by author.

Figure 3: “Safe” trees at Glen Rosa (photograph by author).

Figure 4: Badger traces on mossy tree trunk (photograph by author).

Figure 5: Felled trees and beaver dam at Bamff (photograph by author).

Figure 6: Beaver dam and fencing wire (photographs by author).

Figure 7: Flotational device at Bamff (photograph by author).

Figure 8: Temporalities of Care.

Figure 9: Stags in the Highlands (photograph by author).

Figure 10: Protected and felled trees in Cumbernauld (photograph by author).

Figure 11: Sign at Glasgow botanic gardens showing a grey squirrel with monstrous teeth, warning that they bite (photograph by Seán Mainwaring).

Figure 12: Red squirrel at feeding station near Loch Eck (photograph by author).

Figure 13: Native tree times. Anthropologist Mariana Cruz A. Lima made this collage after our conversation about the different temporal reference points that define native / alien species in our fields. Mariana works with landless communities' reforestation projects in the Brazilian Northeast, where these categoriations are tied to colonial timelines. My collaborators commonly use the end of the last ice age as their reference, because these timeframes are considered large enough to allow evolutionary processes to develop. Image by courtesy of the artist.

Figure 14: Dogwood in dead hedges, Cumbernauld (photograph by author).

Figure 15: Messy Landscapes, Messy Times.

Figure 16: Dark tunnel to the forest (photograph (edited) by author).

**A**s a new conservation paradigm, rewilding is quickly gaining popularity across Scotland. Against the urgencies of the Anthropocene, rewilding projects offer hope by imagining radical visions of biodiverse futures that promise liveability not just to humans but a large host of species. Based on multi-sited ethnographic fieldwork conducted in Scotland, this study explores the diverse multispecies temporalities that come to matter within rewilding.

Scottish rewilding landscapes are populated by various beings and absences that blur rigid categorisations of linear temporality into past, present, and future. The ghosts of extirpated species continue to shape the becoming of landscapes, and the unruly presence of invasive alien species complicate the convivial ethics of rewilding initiatives. Following the temporal entanglements of various Scottish beasts, this book describes the interconnections between time, death, and belonging in storied landscapes.

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