The Ecological Citizen

Vol 8 No 2 2025

ISSN 2515-1967

A peer-reviewed journal

www.ecologicalcitizen.net

CONFRONTING HUMAN SUPREMACY IN DEFENCE OF THE EARTH

CONTENTS

The Ecological Citizen Vol 8 No 2 2025

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This issue is dedicated to Ian Whyte (1941–2025), a founding editor of the journal

A selection of contemporary visual art is interspersed between the text-based content

Also published by *The Ecological Citizen*

EarthTongues — https://blog.ecologicalcitizen.net/

Rewilding Successes — https://rewilding.ecologicalcitizen.net/

Ian Whyte (1941–2025): An appreciation

Patrick Curry

Patrick is a writer and scholar based in London, UK. His works include *Ecological Ethics: An introduction* (Polity Press, 2017).

Keywords: conservation movement; direct action; ecological living; natural history
Citation: Curry P (2025) Ian Whyte (1941–2025): An appreciation. *The Ecological Citizen* **8**(2): 99–103.

On the 13th of February 2025, Ian Whyte died at his home in Ottawa in the company of his beloved wife Karen. He was eighty-three years old. But this isn't a full or standard obituary. Rather, it's an account focused on Ian's life as a lover of, and tireless warrior on behalf of, the Earth. A first-rate field naturalist, he was also (in the words of a friend and colleague, Frank de Jong) "a passionate, intelligent, well-read, highly spiritual green activist who essentially dedicated his life to the preservation and conservation of ecosystems, the rehabilitation of degraded landscapes, creation of new wild areas, and to changing the mindset of the public to value nature for its inherent value rather than merely for its dollar value". (The term 'spirituality' here should probably be qualified as 'Earth-centred'.)

Ian and I first met in 2006, when he and Karen visited London, where I live. We had been corresponding through a shared interest in, and commitment to, the philosophy and programme of Left Bio developed by David Orton (1934–2011), and when Joe Gray and I hatched the idea of starting an ecocentric journal over a couple of organic beers on 11 May 2016, Ian was naturally the first person we thought of. So Ian was a founding editor of *The Ecological Citizen* (*TEC*), and it became an important part of his life. But his presence for us, the other editors, was massive and integral. It's fair to say that although we are all ecocentric in our values and orientations, Ian was *primus inter pares*: a one-man ecocentric conscience who could always be relied upon to give it to us, and to our contributors, straight.

Indeed, if I had to sum up Ian in one word, it would be integrity. His was uncompromising. He would have liked what David Brower said: "I was not always unreasonable, and I'm sorry for that". (Brower was executive director of the Sierra Club until it shamefully backed down on human overpopulation and nuclear power.) Does that mean Ian was confrontational? No; he simply insisted, forthrightly and persistently but not aggressively, on questioning "unbridled human superiority", the "vastly excessive human enterprise", and

"the system, which [is] dedicated to consuming the whole Earth, until death reigns everywhere".

But his was not simply a negative critique. To the end of his days, Ian was deeply concerned with what practical steps we could take to realize ecocentrism, to make it real in practice, and he rightly insisted that whenever at all possible, our articles include some attempt to spell out steps forward on the ground, as it were.

Those phrases I've just quoted are taken from Ian's contributions to *TEC* and to *Earth Tongues* (*ET*), the journal's accompanying blog. Ian contributed eight articles to the journal, including two co-authored plus one book review, and six entries to the blog. All are excellent, but particularly indispensable, I would say, are:

- My path to ecocentrism (2017): www.ecologicalcitizen.net/pdfs/v01sa-09.pdf
- Life's defeat is imminent: We must become effective (2017): www.ecologicalcitizen.net/pdfs/v01n1-03.pdf
- Life's catastrophe: An angry editorial (2018): www.ecologicalcitizen.net/pdfs/v02n1-01.pdf
- My ecocentric decisions (2024): www.ecologicalcitizen.net/pdfs/epub-112.pdf

And the blog post:

- Making my decisions – do least harm (13 August 2020): blog.ecologicalcitizen.net/2020/08/13/making-my-decisions-do-least-harm/

Towards the end of his life, Ian also co-authored, with Joe Gray, a chapter in a new and important collection:

- Respecting nonhuman life: The guide for a better pathway in outdoor recreation. In: Gray J and Crist E, eds. *Cohabiting Earth: Seeking a bright future for all life*. SUNY Press, Albany, NY, USA: 193–208.

For insights into Ian's biography, but even more importantly his guiding principles for ecocentrism in action, as well as his uncompromising critique of the mainstream conservation movement, I urge you to read or reread these articles.

Ian also urged people – that's you and me! – to read (or reread) and engage with 'A manifesto for Earth' (https://is.gd/5wJjLA) by the important ecocentrics Stan Rowe and Ted Mosquin, the latter being a good friend of Ian's and a major influence.

Finally, in line with the rest of his life and work, Ian's ideas include not only ecocentrism as a worldview (see his co-authored, 'Ecocentrism: What it means and what it implies' [2018]: https://www.ecologicalcitizen.net/pdfs/v01n2-02.pdf) but valuable guidance on how to proceed, including the precautionary approach, the weight-of-evidence principle, the principle of reverse onus, reverse matrix, frugality and simplicity, and the principle of do least harm. Do I need to add that Ian was never afraid to point to and name the elephant in the room, gross human overpopulation?

My partner Susan and I visited Ian and Karen in Ottawa, and they took us on memorable walks at Mud Lake, Blueberry Hill and Algonquin Park. I struggled to maintain my little remaining Canadian credibility in a canoe, but they were forgiving. One incident in particular stands out in my memory. Ian was walking ahead of me along the path when suddenly he stopped. Then this big man, whom I can only describe as manly, bent down, pointed to a tiny flower on the side of the path, and said, in tones of wonder, 'Look – a pink!' Later, I thought: Yes! Forget all the macho bluster, self-pity, and nihilism. *This* is what it means to be a man.

Thank you, Ian.

A collection of photos taken by Ian

Introductory text by Joe Gray: Although I never met Ian in person during our decade-long friendship, I quickly grew, and forever stayed, fond of this man from across the Atlantic. That was hardly surprising given the strong overlap in our core interests and values: the pursuit of a green lifestyle; the practice of natural history; and the defence of wild nature (something in which I can only aspire to be as unflagging as he was). As part of our fellowship, we exchanged nature photos from time to time, so each could learn something of the other's observations. In this way, I built up a library of Ian's wildlife sightings, with permission to draw on them as I saw appropriate. And I can hardly think of a more fitting use of this consent than to add some splashes of Ian's beloved wild nature to Patrick's moving obituary.

Autumn leaves.

Leopard frog (top); hooded mergansers (middle); Baltimore checkerspots (bottom).

Maples (top); Sandbanks Provincial Park (bottom).

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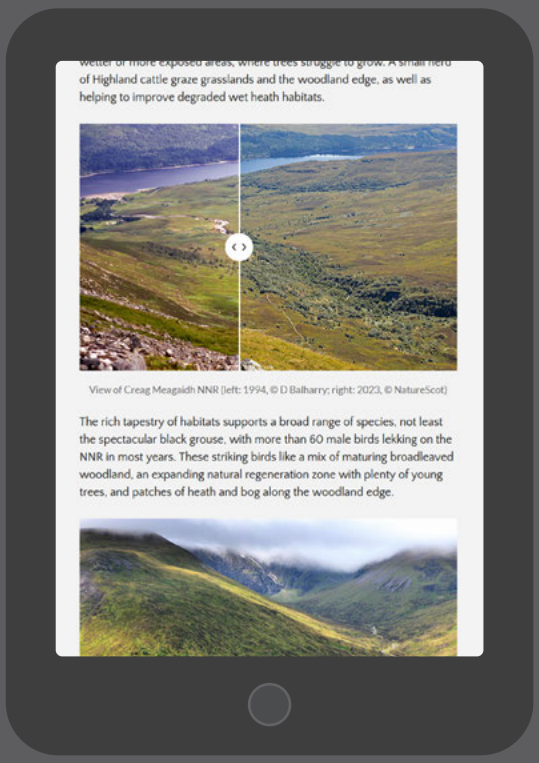
The Ecological Citizen



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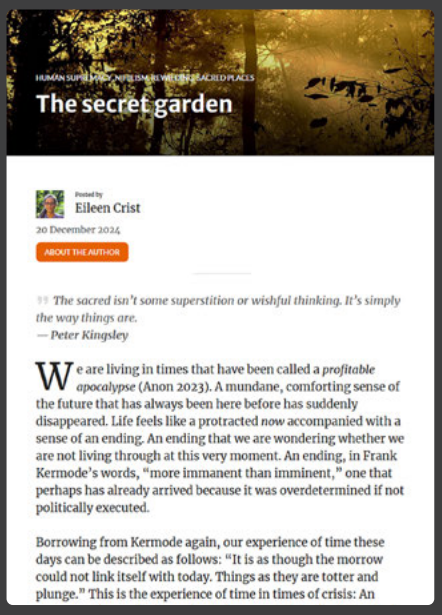


Reflections on humanity's perverse priorities in the wake of the DC air crash

Mateo Santiesteban

Mateo is an educational curriculum developer, firm founder, graphic artist and Californian in awe of California native flora.

Keywords: human supremacy; limits; values
Citation: Santiesteban M (2025) Reflections on humanity's perverse priorities in the wake of the DC air crash. *The Ecological Citizen* **8**(2): 105–6.

There is a particular and predictable rhythm to these things. The plane crashes, the authorities arrive, the media surges forward with its standard refrains. Debris is analysed, flight logs scrutinized, and for a moment – a brief, incandescent moment – humanity is confronted with the idea that air travel is not, in fact, a perfect equation. Then, the moment passes. The skies fill once more, the machinery of global transit lurches forward, and the collective astonishment that catastrophe might intrude upon human convenience dissolves into the next news cycle.

This time, it was January 29, 2025, in the Washington, DC area of the United States. Probably fewer than eighty lives were lost, though the official count remains undisclosed at the time of writing. The investigators murmur about mechanical failure, about wind shear, about the intricacies of aerodynamics as though such events require a grand conspiracy of factors rather than the banal arithmetic of probability. Of course, there is sorrow – an outpouring of it. There are televised vigils and earnest pleas for answers. There is the desperate need to ensure that this, somehow, was an aberration, a glitch in the system rather than the inevitable price of a world that moves at six hundred miles per hour.

That price is rarely spoken of in its full dimensions. The skies brim with flights – more than half a billion of them over the past two decades alone (Statista, 2024). Each take-off and landing is a tiny act of planetary defiance, a momentary disruption in the atmosphere that, in sum, becomes an onslaught. The International Civil Aviation Organization (2024) suggests that air travel accounts for about two per cent of total global carbon dioxide emissions, but such numbers are deceptive, reductive, barely even the preface to the full impact (*cf.* Lee *et al.*, 2021). The contrails carve lines into the sky, the engines churn pollutants into the air, the entire biosphere shifts and groans beneath the weight of this ceaseless movement.

And yet, the moment a fraction of a fraction of those who partake in this system are harmed by their luxurious human entitlements, the human world recoils in horror. A single, rare crash. Fewer than eighty lives lost. No doubt a tragedy for the individuals, families and friends directly affected, but treated as though this were an unfathomable disaster, an offence against the natural order. But the natural order was abandoned long ago, in favour of speed, in favour of efficiency, in favour of bending time and space to human luxury – not human necessity and certainly not human humility.

It is the fundamental asymmetry of the human condition, this belief that the damage exacted on the world is a minor footnote, while even the most infinitesimal risks faced by humanity itself are an intolerable injustice. The forests erode, the coral reefs bleach, migratory patterns shift under the steady drumbeat of jet engines, but none of this provokes the same visceral reaction as a plummeting fuselage and an emergency broadcast. That such incidents are rare, that the loss is statistically insignificant against the backdrop of global travel, only makes the reaction more revealing.

Perhaps what is most telling is not that air travel continues, but that it has become so utterly ordinary. The extraordinary, the miraculous, has been trivialized. What was once a technological wonder – crossing entire continents in the time it takes to read a book – has been stripped of awe, reduced to a dull expectation. And with expectation comes entitlement. A certainty that movement should be effortless, that distance should be meaningless – and that human lives should be invulnerable to the very risks they create.

The wreckage on the outskirts of Washington will be cleared soon enough. The emergency crews will finish their reports. The black box recordings will be dissected, the regulatory bodies will draft their recommendations, and the same patterns will unfold once again. What will not happen – what never happens – is any true reckoning with the larger cost, the unfathomable price that is extracted every day from the planet to sustain this enterprise of perpetual motion.

Because, in the end, the calculation has already been made. Humanity will continue to grieve its own losses, to clutch its collective pearls at the rare occasions when the machine turns against its operators. But the deeper loss, the erosion of the living world beneath the weight of aviation's relentless advance, will remain a silent casualty – unnoticed, unacknowledged, irrelevant in the face of exponentially more pressing concerns.

And so the cycle persists.

References

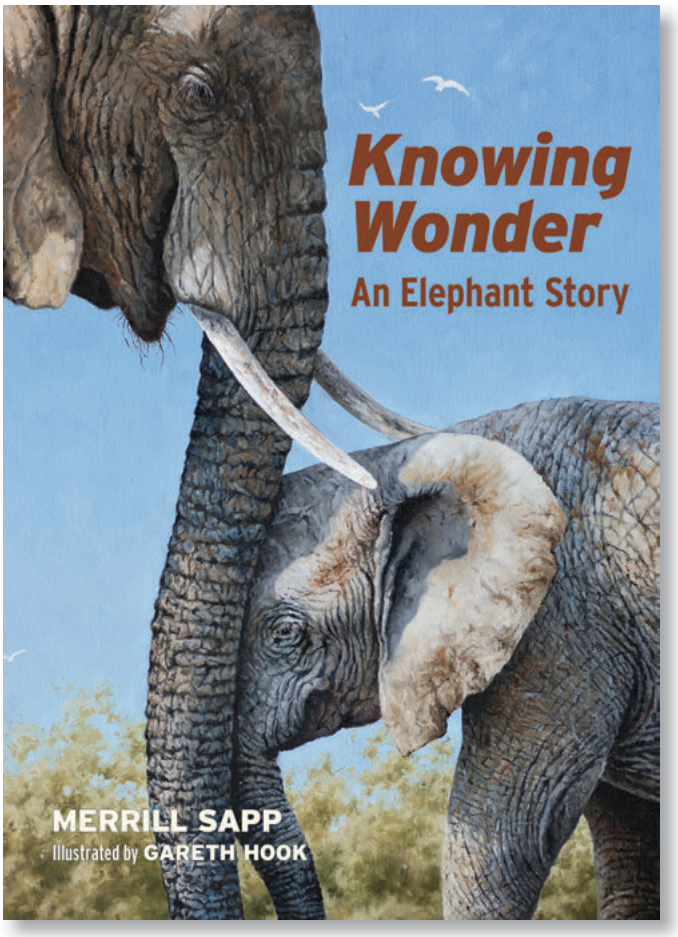
International Civil Aviation Organization (2024) On board a sustainable future. Available at https://is.gd/Lg6ltr (accessed February 2025).

Lee D, Fahey D, Skowron A *et al.* (2021) The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018. *Atmospheric Environment* **244**: 117834.

Statista (2024) Number of flights performed by the global airline industry from 2004 to 2023. Available at https://is.gd/RkIxjd (accessed February 2025).

Knowing Wonder: An Elephant Story

by Merrill Sapp. Illustrated by Gareth Hook



EXPERIENCE THE RHYTHM OF LIFE within an elephant family. Journey with Lua as she leads her family along the interwoven paths that she shares with humans and other animals as they confront a land on the brink of collapse.

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"This touching and insightful book introduces us to elephants as they are to themselves, and to us when we get to know them: fully elephant persons, with their own particular glories, tragedies and concerns in which we can recognize our own. The author does this with a combination of head and heart, of science and love, which brings out the best of each. Indeed, I know of no other way to save either the elephants or ourselves. Reading *Knowing Wonder* is an urgent privilege."

–Patrick Curry, author of *Ecological Ethics* and Editor-in-Chief of *The Ecological Citizen*

"What elevates *Knowing Wonder* from a rich and informed natural history to an engrossing, heart-rending story is the imaginative introduction of Lua and Moyo, African elephants, and their kin, who we follow through a world wracked and ravaged by human appetites and the vagaries of climate change. . . Intrigued and surprised by how these creatures make their way in an increasingly unpredictable world, I have come to appreciate that it is only through the hard truths of the non-human world that we can truly come to understand ourselves."

–James Raffan, explorer and author of *Ice Walker* (2020)

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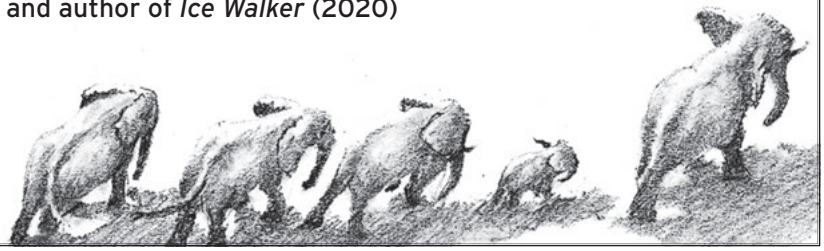

An ecocentric case for an ecological consumption tax

Pieter Verasdonck

Pieter is a retired planner who has published widely on sustainability matters and helped communities, large and small enterprises, local and national governments across the world in improving their ecological sustainability. He lives in Australia.

Keywords: ecological economics; ecological living; limits; societal change
Citation: Verasdonck P (2025) An ecocentric case for an ecological consumption tax. *The Ecological Citizen* 8(2): 108–10.

In this journal, Allen (2024) argues for a shift in perspective from environmental to *ecological* citizenship, empowered by a global social contract that coordinates individual wants and national concerns better with the long-term collective needs of all life on Earth. One thing we can all do to help to reach this lofty goal, and live our ecocentric values, is to change what we consume.

It is a common and tempting error to reason that one's individual consumption is a mere drop in the ocean and thus does not matter. But it matters greatly. Small personal additions add up to overwhelming forces: raindrops become floods. Without changes to consumption habits, one is not ecocentric but egocentric – contributing to the overlapping ecological crises that we face, and exacerbating overshoot. We – the billions of hyper-consumers of the wealthy countries of the world, along with our livestock and pets – play a key role in driving the disappearance of wildernesses and the extinction of species through our collective choice of diets, goods, and entertainment.

People can be motivated to change their consumption habits in various ways: in response to data and to narratives (that demonstrate, for example, the ecological harm caused by certain products); via shifts in prevailing socio-cultural attitudes; through behavioural 'nudges', and so on. But we should not forget a basic truism of economics: that the most reliable way to influence consumption is via *price*. This is, after all, why governments around the world place heavy taxes on harmful products such as tobacco and alcohol – because this is the most effective way of discouraging their use. For this reason, I suggest we need regulations that place consumption taxes on those products that cause the most environmental damage in their production.

Obvious candidates for an increased consumption tax are meat and other animal products (*cf.* Hepburn and Funke, 2022) – especially those produced via industrialized processes, such as intensive feedlot production. There are strong arguments for vegetarianism and/or veganism that are based in the rights of

non-human animals, their sentience, and so on; and there are arguments based on the health benefits for humans of reducing or eliminating animal products from our diets. But putting all these arguments aside, it is clear that the industrialized production of meat and other animal products is a grossly inefficient way of producing human nutrition, and generates enormous ecological harm. It is estimated that the livestock industry produces more than sixteen per cent of all anthropogenic greenhouse gas emissions, and nearly two thirds of all agricultural land is used for growing livestock feed, compared to the less than ten per cent that is used to grow food for direct human consumption (Twine, 2021). Industrialized meat production also contributes substantially to deforestation, biodiversity loss, pollution of water, and so forth (Brooks, 2011). In comparison, widespread adoption of plant-based nutrition would greatly reduce the negative environmental impacts of the agricultural sector (Chai *et al.*, 2019). Ecocentric diets do not have to be vegetarian or vegan, but can be flexitarian, pescatarian, Mediterranean – so long as they greatly reduce the intake of meat and other animal products compared to the Western 'norm'.

This example suggests a general principle: the ecological 'footprint' of a product can be determined, and then used to set a proportional consumption tax on that product. This simple measure will encourage consumers to choose products that are less ecologically harmful, and thereby encourage producers to move towards less harmful methods of production (*cf.* Ekins and Speck, 2011).

This is an example of the well-known user pays approach. At the moment, much of the ecological costs of our consumption are not paid for by the consumer, but by others – by non-human animals and ecologies, by people in poorer nations, and by future generations. The judicious use of an ecological consumption tax would help to prevent this cost-shifting, and would thereby transform consumption habits.

An ecological consumption tax has a number of advantages over ecological taxes on production, such as the familiar idea of a supply-side carbon tax. To begin with, unless such a tax on production is implemented universally, ecologically damaging industries will tend to respond by shifting production (where possible) to those jurisdictions that do not levy such a tax. A consumption tax, on the other hand, affects all companies that sell into that market, regardless of where they produce. Furthermore, ecological taxes on production – given the complex global value chains often involved – are also substantially more complex to implement compared to consumption taxes (*cf.* Postpischil *et al.*, 2021).

A key criticism of consumption taxes is that they are regressive (Warren, 2008). As 'Engel's Law' points out, poor people spend the largest proportion of their incomes on necessities, such as food, and consumption taxes on basic necessities therefore impact those people disproportionately. One way to overcome this unfairness is by 'ring fencing' the government revenue obtained from an ecological consumption tax, and using part of that revenue for rebates for poorer households. The rest of that revenue could then be used to support

ecological restoration projects, such as rewilding areas and rehabilitating salt-damaged or polluted land – as well as other initiatives such as retrofitting houses for energy efficiency, improving public transport to reduce reliance on automobiles, and so forth.

At present, our collective patterns of consumption embody the old anthropocentric habit of seeing nature as endlessly exploitable for human ends – a habit that will destroy us all if we continue indulging it. I have suggested here that one way to help to break us of that habit is through the introduction of an ecological consumption tax – to use the simple mechanism of price to entice consumers to live more ecocentrically. What is more, such a tax preserves the 'free choice' beloved by liberalism (and is thus more politically acceptable than outright bans), can be made equitable and fair, and can help to fund the care of the Earth – the cradle of all life.

References

Allen A (2024) Towards ecological citizenship: Institutional violence and the social contract. *The Ecological Citizen* **7**: 173–9.

Brooks C (2011) Meat's environmental impact. Woods Institute for the Environment, Stanford University. Available at https://is.gd/w6hV1x (accessed March 2025).

Chai B, van der Voort J, Grofelnik K *et al.* (2019) Which diet has the least environmental impact on our planet? A systematic review of vegan, vegetarian and omnivorous diets. *Sustainability* **11**: 4110.

Ekins P and Speck S (2011) *Environmental Tax Reform*. Oxford University Press, Oxford, UK.

Hepburn C and Funke F (2022) A meat tax is probably inevitable – here's how it could work. *The Conversation*, 11 August. Available at https://is.gd/t716xV (accessed April 2025).

Postpischil R, Jacob K, Siemons A *et al.* (2021) Ecological steering with value-added taxes and taxes on consumption. Forschungszentrum für Umweltpolitik Report, Freie Universität Berlin, Berlin, Germany. Available at https://is.gd/y3BNwK (accessed March 2025).

Twine R (2021) Emissions from animal agriculture – 16.5% is the new minimum figure. *Sustainability* **13**: 6276.

Warren N (2008) A Review of Studies on the Distributional Impact of Consumption Taxes in OECD Countries. OECD Social, Employment and Migration Working Paper No. 64. OECD, Paris, France. Available at https://is.gd/vwJyLX (accessed March 2025).

Paradise Lost: 6th Extinction (series)

Milena Popov

From the artist: "With continuous biodiversity loss due to climate change, deforestation, urbanization, pollution, poaching, resourceism and speciesism, our society is causing the sixth mass extinction. Are we aware of this ecocide? Do we care? Home-made cranberry syrup in this series depicts bleeding animals highly threatened by extinction. As blood, cranberry syrup on these paintings goes through natural processes and changes from a bright shiny red colour to coagulated dark red and then rotting brown. Thus, these paintings are in an ongoing state, like the current mass extinction."

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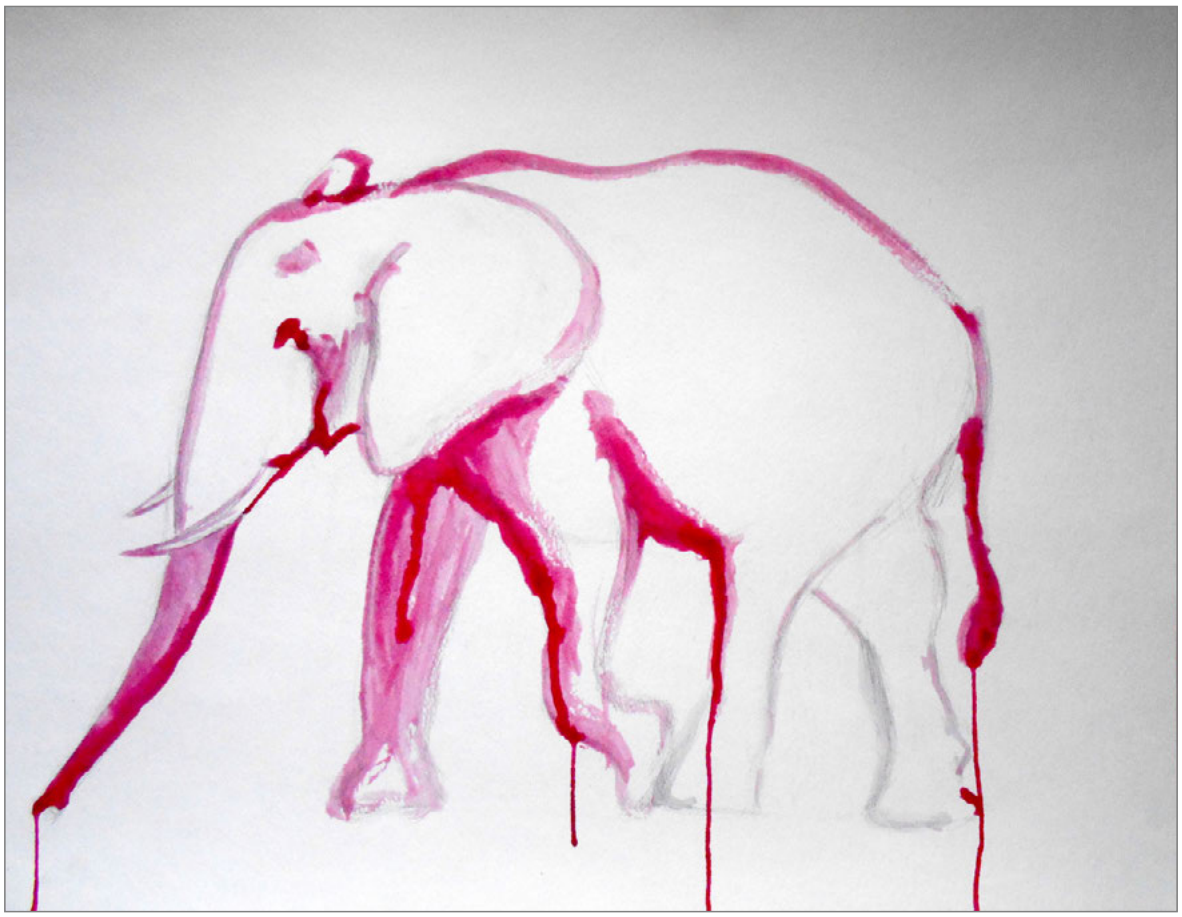

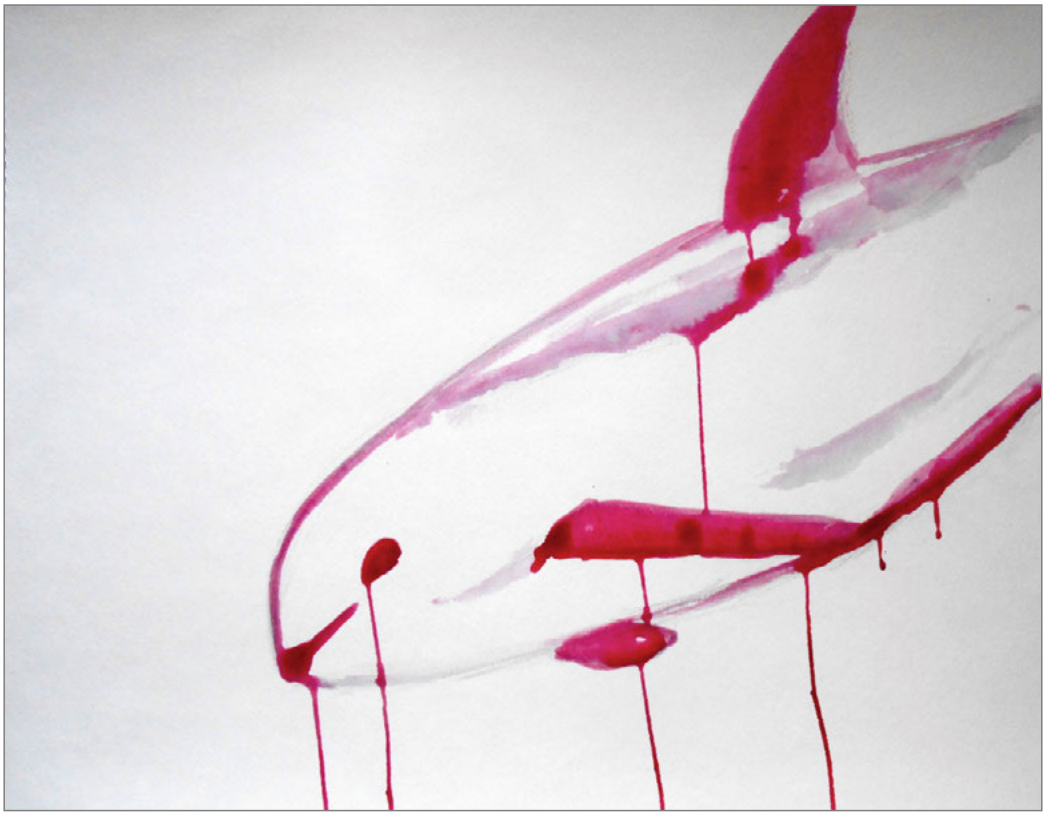

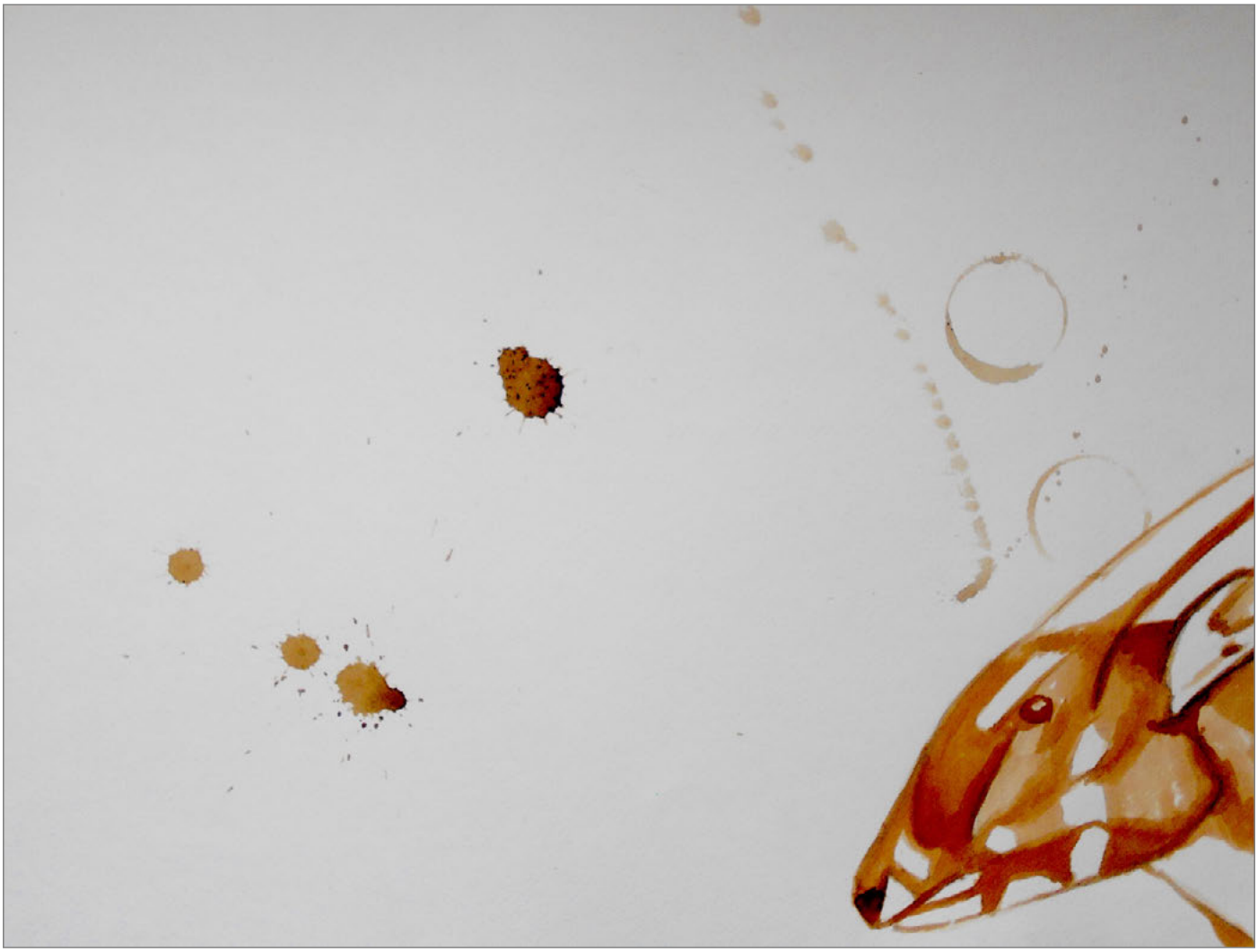

Paradise Lost: Out of the Picture (series)

Milena Popov

From the artist: "What happens when songs of many birds remain only as an archival recording, Lonesome Georges as the last preserved specimens in museums, and the Global South as an exotic winter tourist destination that daily losses its 'exotic charm'? As yellowish brown hues of the tea (being a natural pigment) fade away over the years, animal portraits gradually disappear, likeold photographs in a forgotten book."

Higher-quality versions of artwork from this issue: https://www.ecologicalcitizen.net/artworks.php?v=8&n=2

A condemned cathedral: Thoughts on Edward Abbey's *Desert Solitaire*

Alex Kellgreen

Alex is a student at the University of Utah, studying Communication and English with a passion for Environmental Humanities. He is particularly interested in theories of enchantment, especially as manifested through literature, film and video games.

Keywords: anthropocentrism; becoming ecocentric; rights of nature; storytelling
Citation: Kellgreen A (2025) A condemned cathedral: Thoughts on Edward Abbey's *Desert Solitaire*. *The Ecological Citizen* **8**(2): 118–22.

Meaningful movements often begin with words on a page. Prose holds the power to transport readers from their comfortable seats to the most exquisite sites nature has to offer. In an increasingly disenchanted modern age, literary experiences of nature can be a powerful tool to inspire ecological connection. One of the most influential eco-authors in that vein is Edward Abbey.

Abbey was an American author and essayist whose writing focused on eco-philosophy and eco-anarchism, and pays special attention to the red-rocked deserts of the Southwest US. His most famous work, arguably, is *The Monkey Wrench Gang*, published in 1975. The novel chronicles the escapades of its titular gang as they sabotage bulldozers, trains and other industrial threats to the environment, culminating in an ambitious scheme to bomb the Glen Canyon Dam and free the Colorado River.

Abbey's work had a tremendous influence on the more radical fringes of the environmental movement – inspiring, for example, the formation of the eco-anarchist group Earth First!. As Dave Foreman remarked, one of the initial goals of that group was "[t]o inspire others to carry out activities straight from the pages of *The Monkey Wrench Gang*" (quoted in Woodhouse, 2018: 185). As indeed they did – sabotaging power lines and ski lifts to oppose industrial development in wild areas.

Also an inspiration to Earth First!, *Desert Solitaire* is Abbey's keystone work of nonfiction. Published in 1968, it serves as a sort of journal of Abbey's time as ranger at Arches National Monument (in Southeast Utah), and is full of vivid imagery, philosophical meditations and no shortage of defiant wit. In this work, Abbey insists that a truly successful environmental movement requires the decentring of humanity and a greater reverence for wild, undeveloped

nature. As he puts it, "[w]e are obliged, therefore, to spread the news, painful and bitter though it may be for some to hear, that all living things on earth are kindred" (p. 22).

In spite of being born and raised in Utah, I had never heard of Edward Abbey until I encountered him during my university studies. In the autumn of 2024, I was assigned the first few chapters of *Desert Solitaire* in a class taught by Dr. Alf Seegert. Immediately, I understood why Abbey's work fiercely inspired so many readers. Most of all, I was struck by the book's staggeringly evocative prose. An early passage of the book deserves to be quoted at length:

> *I go outside and close the switch on the generator. The light bulbs dim and disappear, the furious gnashing of pistons whimpers to a halt. Standing by the inert and helpless engine, I hear its last vibrations die like ripples on a pool somewhere far out on the tranquil sea of desert, somewhere beyond Delicate Arch, beyond the Yellow Cat Badlands, beyond the shadow line.*
>
> *I wait. Now the night flows back, the mighty stillness embraces and includes me; I can see the stars again and the world of starlight. I am twenty miles or more from the nearest fellow human, but instead of loneliness I feel loveliness. Loveliness and a quiet exultation (pp. 14–15).*

I needed more; 40-odd excerpted pages weren't nearly enough. That weekend, I drove downtown to Ken Sanders' Bookstore and bought myself a copy.

Readers today might find it hard to embrace Abbey whole-heartedly: he's far from a paragon. As Woodhouse (2018: 186) writes, Abbey "was probably the only environmental hero who could get away with writing about tossing empty beer cans out of the window of a moving vehicle [and] contemplating wilderness while blasting across a stream in a pickup truck". Furthermore, Abbey's evidently racist comments in other works are highly regrettable. However, work as important and beautiful as *Desert Solitaire* transcends the personal failings of the author. So I have chosen to concentrate here on Abbey's ecocentric sensibility and masterful writing, which I believe are enduringly valuable despite his complicated character.[1]

Desert Solitaire could not be written today. As Abbey writes in the introduction, "This is not a travel guide but an elegy. A memorial. You're holding a tombstone in your hands. A bloody rock" (p. xii). It is an elegy because many of the settings in *Desert Solitaire* no longer exist, or are no longer accessible, thanks to industrial 'development'. The longest chapter in *Desert Solitaire* – entitled "Down the River" – is a microcosm of the book as a whole, and may just be the literary odyssey we need to consider the consequences of such 'progress'.

"Down the River" chronicles Abbey's journey through Glen Canyon along the Colorado River. At the time of his voyage, it was well known that Glen Canyon was soon to be dammed (or damned...) and flooded in order to create a massive reservoir to be known as Lake Powell. This name is quite familiar to me; growing up, all of my friends with more outdoorsy parents took frequent trips

to Lake Powell, bringing back thrilling stories of boats and waterskis. I'd never been myself, but it certainly sounded like an envious locale.

Thus, my reading of "Down the River" was my first visit to Glen Canyon. The journey along the water is slow, meandering, and mostly uneventful. However, Abbey's vivid descriptions of the landscape draw you right in. The gentle flow of the river is framed by colossal rock walls that he paints with loving detail:

> *Down the river we drift in a kind of waking dream, gliding beneath the great curving cliffs with their tapestries of water stains, the golden alcoves, the hanging gardens, the seeps, the springs where no man will ever drink, the royal arches in high relief and the amphitheatres shaped like seashells. A sculptured landscape mostly bare of vegetation - earth in the nude.*
> *We try the walls for echo values-*
> HELLO . . . .
> Hello . . . .
> hello . . . .
> *– and the sounds that come back to us, far off and fading, are so strange and lovely, transmuted by distance, that we fall into silence, enchanted (p. 144).*

My favourite site along that river conjured out of the past by Abbey's prose is Music Temple (Fig. 1) – given that name by the nineteenth-century explorer John Wesley Powell. When Abbey discovers the tabernacle, he quotes Powell's journal from 1869: "We are pleased to find that this hollow in the rock is filled with sweet sounds. It was doubtless made for an academy of music by its storm-born architect; so we name it Music Temple" (p. 164). This passage moved me deeply. I was struck with indescribable wonder and overwhelming sadness: wonder because of Powell's poetic elucidations of the site, and sadness because of the knowledge that it is gone, drowned, perhaps never to be seen again. I yearned for a painting or photograph of the Temple, some sort of enduring visual memory, and I was able to find one of the very few. That image is now my phone's wallpaper; I look at the Temple every day, as best as anyone can, now.

Desert Solitaire's role as an elegy, a memorial, is clearer in this chapter than anywhere. The entire journey down the river is imbued with the melancholic knowledge that every wonder we encounter is soon to be sunk and drowned. It's haunting. "A pre-dawn wind comes sifting and sighing through the cottonwood trees", Abbey writes, "the sound of their dry, papery leaves is like the murmur of distant water, or like the whispering of ghosts in an ancient, empty, condemned cathedral" (p. 159). He presents the natural sites as sacred, divine, untouched by humankind. The vast, unreachable alcoves are amphitheatres for God's symphony orchestra (p. 142). Quoting Balzac, Abbey suggests, "In the desert [...] God is there, and man is not" (p. 163). Thus, the implication is, the impending damnation of the canyon is indefensibly sacrilegious. Soon, humankind will be there, and God will not. If humans have any place here, it is as appreciators and worshippers first, and protectors if they must. Not murderous apostates.

Today though, in a horrible irony, there is a chance that Music Temple will emerge from its watery grave. Owing to the effects of global warming and climate change, Lake Powell is drying up. The cause and implications of this phenomenon are tremendously disturbing and concerning. However, I can't help but feel some level of morbid satisfaction at Powell's shrinking. The hubris of humankind drowned Glen Canyon, and the hubris of humankind is inadvertently leading to its rebirth. Abbey might have felt the same way.

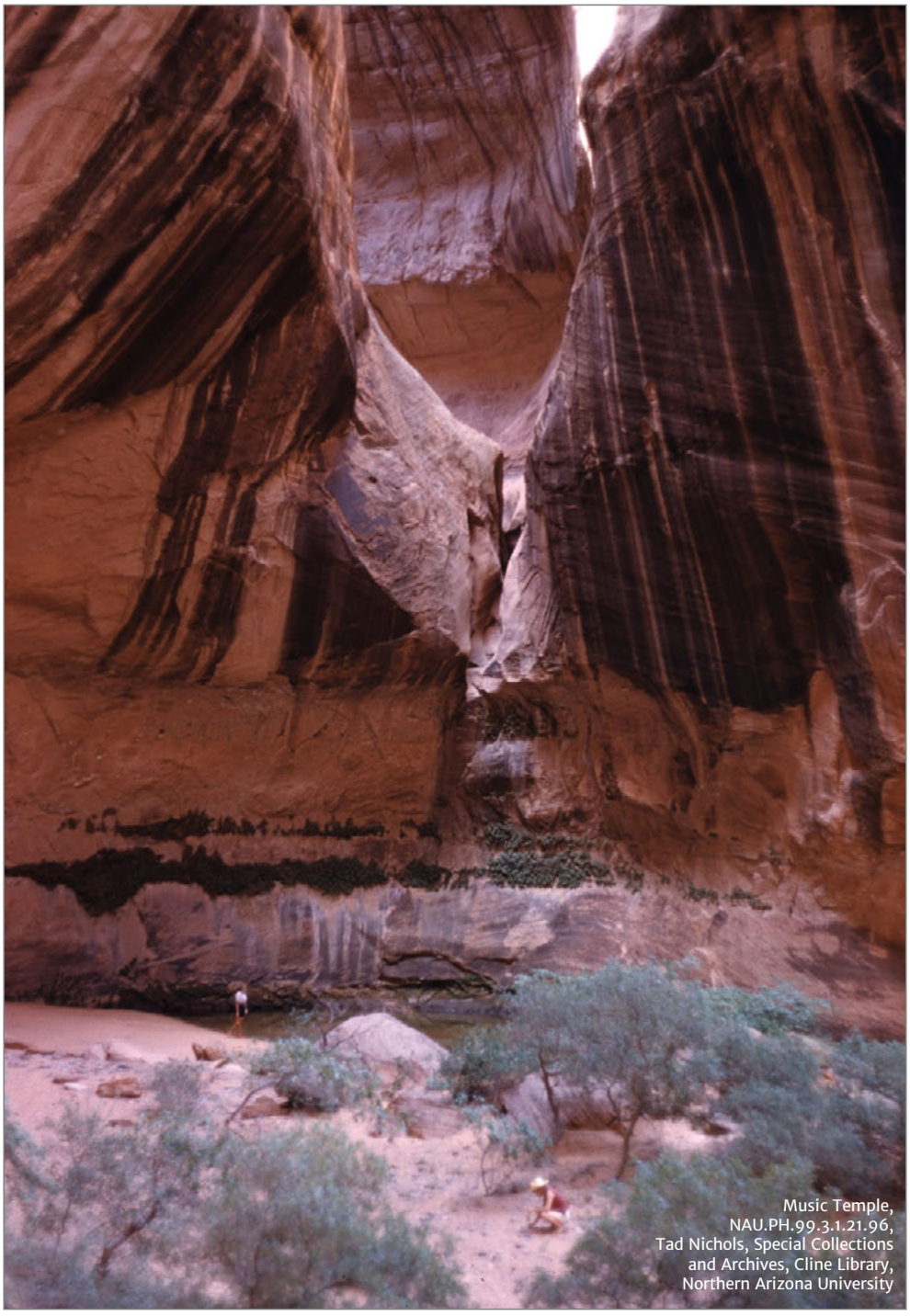

Figure 1. Music Temple.

Perhaps, one day, I'll lay my eyes on Music Temple after all. I hope I don't get my wish, but it looks like I just might.

Reading *Desert Solitaire* in this era of ecological catastrophe, I found this book ringing deeply true. Indeed, Edward Abbey's exquisite and arresting landscapes lit a fire within me – a latent passion for ecocriticism that had just been waiting for the right book to ignite it. I couldn't ignore it; shortly after finishing *Desert Solitaire*, I quit my job as a custodian in pursuit of something more meaningful and productive. Now, I'm working at the University of Utah's Wilkes Center for Climate Science and Policy (https://wilkescenter.utah.edu/), advocating for the environment however I can. Sure, it's bureaucratic; it's not quite blowing up a dam; but that's okay.

Works of literature like *Desert Solitaire* remain a vitally pertinent piece of the ecological movement because their evocative capabilities can usher readers of any generation to a fierce and lasting commitment to ecocentrism over anthropocentrism. Through its sublime landscapes and compelling meditations, Abbey's work insists that we decentre humanity, and thereby open ourselves to the idea of nature as sacred, divine. It suggests that if we begin to see natural sites as cathedrals, the results are bound to be provident. Such personal, vivid, and human writing as Abbey's brings the high moral ideal of ecocentrism straight into readers' hearts, clear and piercing as a ray of Southwest desert sun.

Note

1 Abbey contained multitudes – a self-described racist and cultural chauvinist, yet also a passionate opponent of the Vietnam War, supporter of Native American rights and Cesario Chavez's National Farm Workers Association, and believer that the 'superior races' were those who trod the lightest on the Earth (such as the Bushmen of Africa and the Aboriginal Australians). For a spirited discussion see Smith (2019).

References

Abbey E (1968) *Desert Solitaire*. The University of Arizona Press, Tucson, AZ, USA.

Abbey E (1975) *The Monkey Wrench Gang*. JP Lippincott, New York, NY, USA.

Smith M (2019) Thirty years gone: Remembering 'Cactus Ed'. *Counterpunch*, 15 March. Available at https://www.counterpunch.org/2019/03/15/thirty-years-gone-remembering-cactus-ed/ (accessed February 2025).

Woodhouse K (2018) *The Ecocentrists: A history of radical environmentalism*. Columbia University Press, New York, NY, USA.

Circle

Anna Gillespie

Plaster and twigs (112 x 109 x 15 cm; 2022).

From the artist: "Both Circle and Path #1 were inspired by the notion of pilgrimage in response to an exhibition at Tremenheere Sculpture Gardens in Cornwall, which is traversed by one of the Santiago de Compostela pilgrim paths. The works attempt to capture how the Earth might experience our footprints and to reclaim the idea of 'footprint' as being a positive force... the lightest way of travelling across the Earth.."

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Path #1
Anna Gillespie
Plaster and graphite (150 x 170 x 15 cm; 2022).

Higher-quality versions of artwork from this issue: https://www.ecologicalcitizen.net/artworks.php?v=8&n=2

Ground

Anna Gillespie

Plaster, bark, ash, stone, twig, straw and leaves (120 x 40 x 15 cm; 2022).

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Ground (detail)
Anna Gillespie
Plaster, bark, ash, stone, twig, straw and leaves (120 x 40 x 15 cm; 2022).

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Detail of work in progress
Anna Gillespie
Imprint in clay.

Higher-quality versions of artwork from this issue: https://www.ecologicalcitizen.net/artworks.php?v=8&n=2

Killing barred owls to save spotted owls is a moral atrocity

William S Lynn

Bill is the founder of PAN Works, an ethics think tank dedicated to the wellbeing of animals (https://panworks.io/). He is also a Research Scientist in the Marsh Institute of Clark University (MA, USA), and an occasional professor of Anthrozoology at Canisius University (NY, USA). A former editor of the journals *Ethics, Policy and the Environment* and *Animals & Society*, he is noted for his work on the intersections of ethics and public policy. The ethics surrounding wolf recovery, urban wildlife, outdoor cats and barred/spotted owls are particularly close to his heart.

To care about both barred and northern spotted owls is to be faced with a Sophie's choice – making a harrowing decision about which owls should survive in the wild or at all. The barred owl removal experiment has failed its original purpose to demonstrate that spotted owls can establish refugia, even if it did delay or pause their decline in some areas. Climate change, habitat degradation, agroforestry, land conversion and a hostile policy environment are together dooming spotted owls in the wild. Killing barred owls to delay this eventuality is a moral atrocity, an effort to 'do something' even if it is scientifically ineffective and ethically wrong.

Keywords: animal ethics; conservation; ecological ethics
Citation: Lynn W (2025) Killing barred owls to save spotted owls is a moral atrocity. *The Ecological Citizen* 8(2): 128–34.

Asked to write in opposition to the US Fish and Wildlife Service's plan to kill nearly a half-million barred owls in 30 years, I find myself in grateful dialogue with Dominick DellaSala's eloquent plea for northern spotted owls (DellaSala, 2025). While we disagree about the ethics and efficacy of a barred owl cull, I understand and resonate with much of his thinking.

DellaSala's argument is not the lazy utilitarianism of traditional conservation – kill some animals over here, save some habitat over there, and if it works out for the best (however that is defined), then the killing of wild lives is unquestionably justified. Such justifications are often anthropocentric, sometimes ecocentric, yet they do very little to rigorously consider both the ethical and scientific aspects of a policy, practice or management strategy. This absence of strict scrutiny of both the ethics and science together is a principle failing of traditional conservation (*cf.* Lynn *et al.*, 2020; Coghlan and Cardilini, 2024).

In contrast, DellaSala shares a measured and deeply informed consideration of what we owe spotted owls. On that basis, he makes a Sophie's choice between sacrificing barred owls (*Strix varia*) for the sake of northern spotted owls (*Strix occidentalis caurina*).[1] The anguish over this choice is subtle but clear. I empathize with the reasons for DellaSala's choice and in no way want to impugn his good intentions.

DellaSala's science

DellaSala's scientific claims are the strongest element of his article. He analyzes the key drivers threatening the extinction of spotted owls. These include the clear-cutting of old-growth forest in the Pacific Northwest, administrative efforts shifting the focus of conservation from habitat protection and restoration to barred owl removal, and the continuing modifications of forest composition by agroforestry. The climate emergency magnifies these drivers. Through no fault of their own, barred owls became another threat vector due to interspecific competition. This is a mess of anthropogenic harms to both owls and their social and ecological communities.

One concern I have is with DellaSala's use of Kent Livezey's work (2009) suggesting that human landscape modification facilitated the in-migration of barred owls. This is featured as a justification for killing barred owls as an invasive species. Livezey's analysis is perceptive but not definitive. It does not rule out a natural migration of barred owls into the Pacific Northwest. As such, we cannot assume that barred owl migration was unnatural, or that barred owls are a non-native species. At best, they are a species in transition, differentially aided and delayed by humans in their migration.

Another concern is framing the conflict between owls as a question of invasion biology. Invasiveness is something of a moral panic in conservation, encouraging a crisis mindset that justifies the killing of animals without adequate reflection and deliberation (Davis *et al.*, 2011; Chew, 2015).

For instance, DellaSala mentions feral cats as a driver of biodiversity loss. Yet the claim that outdoor cats are a zombie apocalypse for biodiversity and public health lacks substantive evidence. It is based on shoddy science that over-generalizes local case studies to the entire globe. This is a classic failure of scientific reasoning and methodological error (Lynn *et al.*, 2019; Ortega *et al.*, 2021; Lynn and Santiago-Ávila, 2022; Wallach and Lundgren, 2025). I hope we can avoid a similar moral panic regarding barred and spotted owls.

My point is not to make a universalizing claim that barred owls have no negative impacts on spotted owls. Such over-generalizations are part of the problem with shoddy science. Rather, we should avoid rash value-based claims paraded as science that goad us into precipitous actions that are neither scientific nor ethical. We must be careful that our concern for biodiversity does not trade in political nativism to become biological nativism.

If barred owl migration is not unnatural, or human forces alone would have driven spotted owls out of the wild, then some of the spleen against barred owls drains away.

DellaSala's ethics

Even so, I strongly resonate with DellaSala's ethical stance. We both share a recognition of the intrinsic value of nature and all its beings. I suspect we are both rewilders too, committed to protecting and restoring wildness for the benefit of other species and nature as a whole. Irrespective of whether humans are culpable for aiding or delaying barred owl's migration west, we have a moral responsibility to do right by spotted owls. What this requires, however, is a matter of ethical dispute that rests in varied axiologies – theories of (moral) value.

Anthropocentrists don't care what happens to either owl. Perhaps they see spotted owls contributing to a natural heritage of humanity, or barred owls as another target for recreational hunting under the guise of endangered species management. Even so, barred and spotted owls are thoroughly instrumentalized in this value paradigm. For non-anthropocentrists of various stripes it does matter, even if there is some difference between how we assess the relative importance of individual wild lives and/or their ecological communities.

Trade-offs and hard choices are familiar to non-anthropocentrists who care about both animals and nature. Both sets of owls matter as individuals as well as constituents of ecological and social communities. This makes being in right relationship with both owls more complex, but it accords with what we know about the ethology and ethics of owls. Both barred and spotted owls are sentient (aware), sapient (self-conscious) and social (relational) creatures who have an intrinsic value and wellbeing of their own that we may help or harm. Because of these characteristics, they are morally considerable and part of a wider moral community. Mary Midgley terms this *the mixed community*, to which people, animals and nature have always belonged. This is why we owe both owls direct duties of care and justice amongst other ethical concepts (Midgley, 1984; Lynn *et al.*, 2023; Baker, 2025).

Yet the question remains, is it right to kill barred owls for the benefit of spotted owls? To fully answer this question, we need to say more about ethics, public policy and the Barred Owl Stakeholder Group that participated in the recovery plan for northern spotted owls.

Ethics and public policy

Ethics is related to public policy in a very direct way – as Aristotle notes, politics is ethics writ large. Humans are political animals, motivated by values and ethical expectations. Values and ethics are not separate endeavours from the exercise of power and governance but are instead constituent elements of them. Our actions are motivated by good or ill intentions, have consequences that may help or harm others, and are generated and justified by the ethics and values of our worldviews.

As politics is inescapably entwined with ethics, public policy is driven by values. Facts matter but they are filtered through our worldviews. This is just as true for scientists as it is for citizens and government decision-makers of every sort. The 'science-based policy' so often touted by agencies and nonprofits is a canard cloaking value-based positions under a veil of objectivity. Public policy about every possible topic – including barred and spotted owls – is an outcome

of values and facts for which we need *both* ethics and science. Ethics keeps our values transparent and accountable. Science does the same for the facts. Together they complement each other in triangulating on better versus worse forms of public policy.

In addition, ethics is not an optional add-on to science, but part of its warp and woof. Aldo Leopold's support for the decimation of predators on the Kaibab plateau, for example, illustrates how science may be abused in the absence of ethics (Leopold, 1968). Science and ethics are intertwined in two domains, *internal* and *external*. The internal domain concerns research integrity and covers topics such as data falsification, the misreporting of results and conflicts of interest. The external domain concerns the application of scientific knowledge, and whether it promotes the wellbeing of people, animals and nature. Both domains have direct implications for the wellbeing of morally valuable beings and the community of life. So, a barred owl cull is not only a matter of science, but equally a matter of ethics (*cf.* Rollin, 2006).

The Barred Owl Stakeholder Group

It is because of this relationship between science, ethics and policy that the Barred Owl Stakeholder Group (BOSG) was conceived as part of the scoping process for the Northern Spotted Owl Recovery Plan. Part of that plan was an experiment to remove barred owls for the benefit of spotted owls. Barred owls were to be killed with shotguns after being drawn-in by a squawk-box. Sharpshooters were used because of the difficulty of the terrain, the density of the forest and the need to distinguish between barred and spotted owls (U.S. Fish and Wildlife Service, 2011).

Paul Phifer followed by Robin Bown were the Services' coordinators of the recovery plan. Both had the foresight to understand that the proposed removal experiment was not simply a matter of science but of ethics as well. For this reason, they asked me to help design, train and facilitate an ethics review of the experiment. Utilizing interviews, focus groups, training sessions, seminars, site visits and roundtable discussion, we examined the ethics of barred owl removal.

To their credit and to the best of my knowledge, the BOSG was the first full implementation of the *National Environmental Policy Act* (1969), which demands that agencies "ensure that presently unquantified environmental amenities and values may be given appropriate consideration in decision-making along with economic and technical considerations" (s 102 B; *cf.* Canter and Clark, 1997). Those "unquantified values" were fully examined through the BOSG as part of an Environmental Impact Statement. The results of the BOSG are available in its final report and an article reflecting on its lessons (Lynn, 2012; Lynn, 2018).

A key moment in the BOSG's deliberations was a field trip near Eugene, Oregon, into spotted owl habitat. Bushwhacking for a half hour on old logging roads, we visited a nesting pair of spotted owls. It was there we discussed what needed to be learned from the removal experiment. There were a variety of suggestions about experimental design to increase knowledge of interspecific competition, trophic ecology, niche partitioning and the like. Through the

course of our dialogue, we realized we already knew enough about barred and spotted owl interaction to know why it was not going well for spotted owls. What we did not know was whether the removal of barred owls in a localized area would allow spotted owls to establish a refugium where they could persist and perhaps thrive in the wild. This became the fundamental question which the experiment was originally designed to answer.

Sad-goods and co-values

Because both spotted and barred owls have intrinsic moral value and a wellbeing we can help or harm, action against barred owls requires strict scrutiny of both its ethical and scientific justification. The science question was pressing, but what of the ethical justification for the removal experiment?

A central conceptual tool we used to answer this question is what I call a sad-good. Sad-goods recognize that all life subsists on other forms of life. None of us are pure centres of intrinsic value. Rather, we are mixtures of intrinsic value and extrinsic (instrumental) value – *co-values*. For instance, deer are intrinsically valuable in and of themselves, yet at the same time of instrumental value to wolves, cougars and other subsistence hunters. All life has co-value in this sense. Predation and death is thus sometimes a sad-good, tragic for those who die, but good for other individuals and the community of life that benefit from that death (*cf.* Lynn, 2018; Lynn *et al.*, 2023).

The BOSG considered whether the harm planned for barred owls was a sad-good – tragic for barred owls, but good for the spotted owls. Importantly, this was not the lazy utilitarianism I referenced earlier. We did not dismiss or trade-off the wild lives of barred owls in the pursuit of biodiversity. Rather, it was akin to the balancing of interests and values used in practical ethics, law and public policy. Sometimes equally important but different interests and values are in conflict, and they need to be balanced against one another. Our individual rights as citizens or human beings are often balanced against the common good. A decision over which takes precedence and when is not a foregone conclusion of greatest utility. Rather, it is a situated decision based on the details of the values and interests at stake and the circumstances of the case.

So instead of a utility calculus, we used harm–benefit ratios in our balancing. Such ratios are used in bioethics to balance the potential harm done to human or animal subjects in experimental investigations (*e.g.* efficacy and safety trials of new drugs) or medical procedures (*e.g.* risky novel surgery). We reasoned that the harm done to a limited number of barred owls over a limited period was outweighed by the potential benefit of establishing refugia for spotted owls and forestalling extinction in the wild. This was a sad-good of limited harm to barred owl individuals, with huge potential for spotted owls as individuals and as a distinct species. To the BOSG, this seemed a reasonable if not perfect ethical position to take at the time.

Moral atrocity

Unfortunately, the removal experiment failed to establish refugia. It did slow down or stall the decline of spotted owls in places, but it did nothing to help

them reestablish themselves or thrive for the long run (Wiens *et al.*, 2021). As DellaSala rightly notes, killing barred owls will not work without a full suite of critical habitat protections, rewilding, changes in logging practices and climate protections. None of this is either likely to happen or happen in time to save the spotted owl.

Indeed, climate change and habitat degradation will likely drive a nail into the coffin of spotted owls. Forest will continue to dry, fires will consume critical habitat, land will be developed and agroforestry will further change the composition of the forest stands and fire scars on which the spotted owls depend.

As importantly, the rot at the heart of the cull is this: the harm–benefit ratios are now reversed. About a half-million barred owls will be sacrificed with no substantive benefit to spotted owls. The proposed cull is simply playing for time, a holding action to 'do something' for spotted owls no matter how ineffective it may be. It is a bandage that does not address the underlying causes of spotted owl decline or ensure their survival in the wild. Consequently, hundreds of thousands of barred owls will die needlessly.

The Sophie's choice that confronts DellaSala and all others who care about wild lives is wrenching. This is not a simple black and white issue of right and wrong, and I respect those who disagree with me. Yet it constitutes a moral injury to be placed in such a position to adjudicate whose innocent lives we spare and whose we condemn.

Beyond rejecting an ongoing Treblinka for barred owls, I don't have an easy answer for how we do right by spotted owls. Reforestation is unlikely given development, resource extraction, climate change and a rightward shift in the policy environment. Even then, resource partitioning between the barred and spotted owls is not guaranteed given overlapping habitat preferences. Other options like captive breeding, gene banking, translocation or zoos represents our failure to protect endangered species *in situ*. Captive breeding in particular raises concerns for the wellbeing of individual owls incarcerated without a real prospect of release.

It may be that we face no good options other than proactively deciding not to intervene and allowing barred and spotted owls to sort out matters on their own. This will likely lead to the extinction of spotted owls in the Pacific Northwest. As tragic as this is, it may be better than trying to 'do something' – as killing barred owls will simply magnify the harm we have already done.

We cannot kill our way back to biodiversity (Lynn *et al.*, 2025).

Note

1 *Sophie's Choice* (Styron, 1979) recounts the decision of a mother who is forced by a Nazi officer to choose which of her two children will be sent to the gas chamber.

References

Baker L, ed. (2025) *Wild Animal Wellbeing*. Springer, New York, NY, USA (forthcoming).

Canter L and Clark E (1997) *Environmental Policy and NEPA: Past, present and future*. CRC Press, Boca Raton, FL, USA.

Chew M (2015) Ecologists, environmentalists, experts, and the invasion of the second greatest threat. *International Review of Environmental History* **1**: 7–40.

Coghlan S and Cardilini A (2024) The use and abuse of moral theories in conservation debate about killing animals. *Conservation Biology* **38**: e14280.

Davis M, Chew M, Hobbs R *et al.* (2011) Don't judge species on their origins. *Nature* **474**: 153.

DellaSala D (2025) Killing barred owls to save spotted owls is the lesser of two evils. *The Ecological Citizen* **8**(1): 68–77.

Leopold A (1968) *A Sand County Almanac: And sketches here and there*. Oxford University Press, Oxford, UK.

Livezey K (2009) Range Expansion of Barred Owls, Part II: Facilitating ecological changes. *American Midland Naturalist* **161**: 323–49.

Lynn WS (2012) Barred Owls in the Pacific Northwest: An ethics brief. Revised. Report Prepared for the United States Fish and Wildlife Service. Available at https://is.gd/7JKzP8 (accessed May 2025).

Lynn WS (2018) Bringing Ethics to Wild Lives: Shaping public policy for barred and northern spotted owl. *Society & Animals* **26**: 217–38.

Lynn WS, Baker L, Borrie W *et al.* (2025) Compassionate Conservation in Practice: A values-driven, interdisciplinary, pluralistic, and deliberative community. *Biological Conservation* **303**: 111002.

Lynn WS, Baker L, Santiago-Ávila F, and Stewart K (2023) Ethics, wellbeing and wild lives. In: Fine A, Mueller M, Ng Z *et al.*, eds. *The Routledge International Handbook on Human-Animal Interactions, Interventions and Anthrozoology*. Routledge, New York, NY, USA: 438–52.

Lynn WS, and Santiago-Ávila F (2022) Outdoor cats: Science, ethics and politics. *Society & Animals* **30**: 798–815.

Lynn WS, Santiago-Ávila F, Hadidian J *et al.* (2020) Misunderstandings of science and ethics in the moral panic over cats. *Conservation Biology* **34**: 1038–40.

Lynn WS, Santiago-Ávila F, Lindenmayer J et al. (2019) A moral panic over cats. *Conservation Biology* **33**: 768–76.

Midgley M (1984) *Animals and Why They Matter*. University of Georgia Press, Athens, GA, USA.

Ortega S, Rodriguez C, Mendoza-Hernández B and Drummond H (2021) How removal of cats and rats from an island allowed a native predator to threaten a native bird. *Biological Invasions* **23**: 2749–61.

Rollin B (2006) *Science and Ethics*. Cambridge University Press, Cambridge, UK.

Styron W (1979) *Sophie's Choice*. Random House, New York, NY, USA.

US Fish and Wildlife Service (2011) Revised recovery plan for the northern spotted owl (*Strix occidentalis caurina*). U.S. Fish and Wildlife Service, Portland, OR, USA. Available at https://is.gd/2OaH2K (accessed May 2025).

Wallach A and Lundgren E (2025) Review of evidence that foxes and cats cause extinctions of Australia's endemic mammals. *BioScience*: biaf046.

Wiens J, Dugger K, Higley J *et al.* (2021) Invader removal triggers competitive release in a threatened avian predator. *Proceedings of the National Academy of Sciences* **118**: e2102859118.

Please Return Me to the Earth: We Are Weather (project)

Brydee Rood

Installation and performance (Auckland, New Zealand; 2017).

From the artist: "I collaborated with palaeoclimatologist and University of Auckland associate professor Anthony Fowler in the development of an installation, workshop and performance project. In the project, 10.8 tons of Huntly coal – quantifying the average New Zealand household's carbon footprint – was installed in the centre of the park-like grounds on a wider bed of wood chips. The performance involved a ritual arrival and dumping of the coal to a grounded public site with an experimental droning composition of earthly, ceremonial bagpipes derived from the iconic musical score *Dark Isle* by Iain MacLachlan (1963), as well as a gravitas gathering, collective contemplation, sharing and handling of the coal."

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Return Me to the Earth

Can the introduction of 'sustainability necessary work' promote security for all?

Junha Yang and Juneseo Hwang

Junha was an activist with Youth Climate Emergency Korea, and recently completed a BA in Sociology at Sungkonghoe University, South Korea. His research interests are environmental sociology and social movement theory. Juneseo is a postdoctoral research associate at the University of Hamburg, Germany, whose research focuses on ecocentric approaches to law and governance.

'Environmental security' discourses and policies often justify extraordinary measures to confront pressing environmental changes perceived as threats to the survival of nation-states. Paradoxically, this increase coincides with a worsening ecological crisis, highlighted by scientific warnings about global climate change, habitat loss and other related environmental issues. This article critiques the orthodox state-centric framing of security, arguing that it perpetuates environmental violence against human communities and non-human beings. This framing places the military at the center of sustainability efforts, and while the military is tasked with protecting states, it has largely escaped accountability for its role in contributing to planetary degradation. As a way forward, this article explores the concept of 'sustainability necessary work' in contrast to the anthropocentric and militaristic notion of 'protection'. It proposes an ecocentric framing of security and repositions human agency in the ongoing efforts to save our planet.

Keywords: demilitarization; ecological economics; ecological living; sustainability
Citation: Yang J and Hwang J (2025) Can the introduction of 'sustainability necessary work' promote security for all?. *The Ecological Citizen* 8(2): 137–44.

Under the world capitalist system, anthropogenic environmental changes have led to the *securitization* of the environment – that is, the treatment in global policy discourses and practices of environmental issues (such as climate, water, food, health, and disaster risks) as threats to security. This, in turn, has helped to provide state apparatuses, which are responsible for much of contemporary ecological disorganization, with more extensive power to protect the territorial state from physical violence and 'exogenous' threats. It has also intensified the zero-sum competition between nation states over

resources – a scarcity framing of the biosphere that reduces nature, a living entity, to extractable resources for the human economy.

In parallel to, and in tension with, the securitization of the environment, post-anthropocentric philosophies and political movements that challenge the logical and ontological fallacies of human superiority over nature have steadily gained public support – and also encountered backlash – worldwide. The rights of nature movement, for example, represents a significant development in the efforts to liberate nature from commodification and destruction by granting ecosystems and species legal personhood and constitutional recognition. For advocates, recognizing the rights of nature constitutes a 'legal revolution' in our history, as it acknowledges not only the intrinsic value of nature but also human responsibilities towards 'non-human' rights-holders, a concept that has long been respected in many non-Western cultures (Boyd, 2017). Other policy proposals, such as ecocide law and green constitutionalism, aim to amplify the voices of non-human beings in environmental law and governance (Bosselmann, 2016; Hwang, 2022).

While these post-anthropocentric ideas commonly emphasize the responsibilities of humans as duty-bearers, there is a pressing need for more in-depth discussions on 'everyday' sustainability practices that foster green citizenship and resist structural violence against nature. Such practices, we suggest, should be an integral part of our civic life; a collective duty rather than an individual choice.

To this end, we explore here the concept of 'sustainability necessary work' as an integral component of active citizenship and our duty towards nature. We begin by examining the problematic nature of the mainstream securitization approach to sustainability (or 'environmental protection' in a more human-centred word) and explain why it is both unethical and ineffective. We then argue for 'sustainability necessary work' as one of the alternative ways of institutionalizing and practising human duties for the sustainability of a more-than-human world. While 'sustainability necessary work' is not a silver bullet for addressing the multitude of global crises and violence, it may serve as a cornerstone for an ecologically just transition aimed at ending human violence and fostering respect for the non-human world.

Securitizing nature ... to burn the planet?

Theoretically, the logic of security operates on the premise that the safety and well-being of individuals and communities are paramount, and it often prioritizes protective measures that can sometimes infringe upon personal freedoms. This framework shapes citizens' duties by fostering a sense of responsibility not only for their own security but also for the collective security of community (Floyd, 2024). Citizens are encouraged to engage in practices that enhance community resilience and safety, which can include participating in civic initiatives, supporting law enforcement and contributing to the welfare of vulnerable populations. Consequently, this logic cultivates a mindset where citizens view their actions as integral to maintaining societal harmony and stability, reinforcing the notion that security is a shared responsibility that transcends individual interests.

As McDonald (2021) writes, the linkage between security and environmental destruction is useful and necessary; however, its legitimacy should be derived from the interests of ecological resilience, rather than being limited to human interests. From this perspective, the mainstream approach to the environment–security nexus, often referred to as 'environmental security', is not fit for purpose. Securitization of the environment entails a geopolitical process of framing environmental degradation as a security issue, thereby justifying 'emergency' measures involving coercive force to tackle security 'threats' (Duffy, 2022). Such rearticulation of the common challenges within the dominant grammar of security risks the perpetuation of the existing power asymmetries and the drivers of violence, such as poverty and discrimination. Furthermore, as modern states are regarded as the only legitimate users of force (Giddens, 1985), the mainstream security-oriented approaches tend to emphasize the survival of the state – an anthropocentric political community that confines 'citizenship' to humans, and more specifically its nationals.

The recent trend in 'decarbonizing' – and further 'greening' – the military and arms industries, ranging from weapon manufacturing to actual warfare, illustrates this 'paradox of securitization'. Although military activities, both in peacetime and wartime, are considered major drivers of pollution, overconsumption, violence and displacement – factors that contribute to the global and local destruction of life-support systems for all inhabitants of the planet (McClanahan and Brisman, 2015) – the military is still recognized as an essential part of the modern state that monopolizes force.

Not only does the military contribute to greenhouse gas emissions through its direct engagement in battles, but the military and arms industries are also major polluters through military training exercises and supply chains. However, these polluting activities have been justified under the aegis of 'national security' and, as such, have been exempted from environmental responsibilities. While the military is the largest single institutional consumer of hydrocarbons in the world (Belcher *et al.*, 2020), the 'security and defence sector' has largely escaped scrutiny under environmental regulations. In other words, as Smith and Lengefeld (2020) highlight, the military has paradoxically reinforced its position as the protector of the state from environmental risks while simultaneously causing environmental destruction and evading accountability.

Following a slight decline during the COVID-19 pandemic, the global arms race has intensified, driven by ongoing international conflicts such as the wars between Ukraine and Russia, and the Gaza conflict. The escalating competition among nations to develop and acquire advanced military capabilities has led to annual global military expenditures surpassing US$2.4 trillion in 2023 (Tian *et al.*, 2024). This arms race poses significant challenges by diverting resources from essential social and environmental needs, perpetuating conflicts and heightening the risks of warfare, including nuclear confrontation. One must thus ask whether there can be a more constructive approach to security logics and practices – whether ecologically, politically, socially or economically – rather than resignedly accepting the proliferation of weapons as compulsory 'self-defence tools' across the globe.

Interestingly, however, this paradox of securitization is rarely discussed in the public sphere or, to some extent, even among environmental activists. At a fundamental level, this silence on the problematic nature of security thinking eclipses the historical and everyday environmental harm caused by the military, often recognizing it as a 'compulsory' element of the state, or at least as a 'necessary evil'. For instance, in political negotiations on climate protection or any other environmental agenda, an exemption clause for the security and defence sector creates loopholes in our sustainability actions and permits militarism to evade criticism.

Prioritizing the military as a security provider further enables an odd convergence between militarism and sustainability – the logic that sees war as inevitable for peace ("If you want peace, prepare for war" – *cf.* Ruggiero, 2023). While we are witnessing the ever-increasing global arms race and the re-militarization of the world, ecosystems and non-human beings are sidelined as 'things' (or 'collateral damage') that can be ignored in decision-making processes regarding war. Countless animals and plants are killed and forcibly displaced, and further exploited in the production of war, such as weapon testing, while their voices remain unheard. Meanwhile, the military and arms manufacturers have proudly showcased 'green warfare' technologies, such as lead-free bullets and hydrogen-powered jet fighters (Depledge, 2023). In promoting ecological security, neither the 'strong' military nor advanced killing machines are necessary or ethical. From an ecocentric viewpoint, humans in the Anthropocene have not only contributed to planetary catastrophes but are also capable of resolving conflicts through peaceful means and promoting security for all, not just for humans.

Sustainability necessary work

Thus, it is more than timely, if not too late, to rethink the 'compulsory work' that human beings are obliged to undertake in order to sustain the health of the planet and protect the lives of all inhabitants. As a duty to make our planet secure, compulsory work should be introduced to reduce violence, thereby replacing the military and disarming the world. This thinking can be further informed by John Barry's idea of 'sustainability necessary work', which sees sustainability as the core virtue of civic life. Unlike the military, which is viewed as 'compulsory service' imposed on individuals by the state, Barry (2005) articulates 'sustainability necessary work' as part of active green citizenship that not only contributes to building a sustainable economy but also fosters self-organizing collective actions against unsustainability. One facet of unsustainability is the 'us-versus-them' logic that militarism permeates through our societies amid global ecological disorganization. Barry offers various examples of sustainability necessary work, such as community farming, human rights activism and recycling, and argues that such work, rather than being imposed by states, needs to be designed by citizens themselves. In this way, citizens can promote ecological security by self-organizing to tackle socio-economic inequalities and meet the needs of global and local ecosystems.

While we acknowledge that sustainability necessary work may take various forms specific to local contexts, we also assert that such responsibilities should be fulfilled towards green disarmament, rather than green militarism. To this end, actions such as conscientious objection to the military, decommissioning work and peace activism can be recognized as sustainability necessary work, among many others, further linking the promotion of ecological security to the building of peace for all. For example, based on his earlier remarks on sustainability necessary work, Barry (2016) adds resistance as an integral part of active citizenship, thereby proposing 'sustainability necessary resistance work' for all. Recent campaigns for green disarmament advocate a new approach to promoting security for all by emphasizing the detrimental effects of warmaking and the arms industry (Claussen, 2021). We believe these campaigns must advance further to assert the responsibility of states to reduce armaments, including weapons of mass destruction, military expenditures, and militarized areas, such as outer space. Green disarmament also involves investing in programmes that foster sustainability and justice, including welfare, animal rights, reforestation and rewilding. Specific investment plans can be shaped through democratic deliberations and contestations.

While Barry's concept of 'resistance' implies progressive anti-capitalist activism, we note that, lately, ecofascism of various stripes has tried to assume that mantle – exploiting citizens' valid grievances by greenwashing racist rhetoric and policies. For example, migration and overpopulation – rather than over-consumption by the world's wealthy – are blamed by right-wing politicians as the primary cause of anthropogenic climate change, who imply the reduction of poor and non-white populations as a solution (Moore and Roberts, 2022). Such discriminatory narratives and actions cannot be justified as 'resistance', as they perpetuate and impose sacrifices to sustain privileged lifestyles – much like the use of 'national security' to defend military activities that endanger the planet's security and well-being.

What we urgently need is a reconceptualization of 'what to secure' from an ecocentric perspective, accompanied by the implementation of corresponding collective actions. Nevertheless, advocating for the concept of mandatory works for sustainability necessitates careful consideration regarding consequential and procedural legitimacy. The former considers how it can better contribute to equally protecting a more-than-human world, while the latter examines whether decision-making processes are democratically just and fair, not only to humans but also to non-human beings.

By moving away from the monolithic logic of national security, a pluralistic approach to understanding the planet's well-being embraces various, sometimes conflicting, worldviews regarding the status of humans within nature, as well as diverse methodologies and practices aimed at healing the wounded Earth. As previously noted, the fundamental principle that defines better sustainability outcomes is the fair protection of life, rather than the interests of the privileged. To this end, drawing on Barry's earlier ideas, we can advocate for a range of activities as necessary work for sustainability, including sustainability education, community gardening, and more confrontational actions

such as community resistance against extractivism and direct actions to halt polluting activities. These are 'mandatory' actions that individuals must undertake to exercise their agency, and they also deserve support and protection from political backlash, as has been observed recently. Such collective actions are inherently aimed at the protection of life, whereas the military and armament are fundamentally tools of killing and death. Therefore, it can be argued that the former are much more aligned with ethical security practices.

However, consequentialist thinking may undermine the democratic values essential to the sustainability transition. Civic duties institutionalized within the modern state system prioritize securing interests and protecting a community limited to the human realm, thus neglecting its ontological inseparability from the natural world. The coercive nature of top-down and state-centric decisions is evident in the resulting discrimination and violence. For example, those considered 'incapable' of fulfilling their duties have frequently been treated as second-class citizens in many societies. Recent alerts regarding 'environmental ableism', which discriminates against communities with disabilities in environmental policy (Mitchell, 2024), threaten to dehumanize vulnerable populations and could, in a worst-case scenario, unjustly legitimize Malthusian prescriptions of sustainability. In emphasizing the equal protection of life, we assert that this approach is certainly not aligned with our vision.

Accordingly, the political boundaries of democracy must be redefined to include marginalized communities and non-human voices in decision-making processes, thereby abolishing laws and governance arrangements that foster anthropogenic environmental harm. Here, we stress the contestatory – rather than consensual – nature of democratic planning as a modus operandi for designing and implementing sustainability necessary work. For some communities, nation-states may be still deemed relevant for the protection of life, while others may seek alternative forms, such as bio-regional polities. Sustainability cannot be attained through a rigid adherence to our current system; instead, transformations can occur along multiple pathways. What is certain here is that the concept of sustainability necessary work is not confined to the debates on what green jobs look like but lays the cornerstone for far more radical imaginaries of a more-than-human world.

Towards a new political community

While global environmental issues have been framed within the security realm, the destruction of the planet has persisted and even intensified due to the actions of 'security providers', such as nation-states and their militaries. Although security necessitates urgent and compulsory actions, the securitization of our burning planet backfires – exacerbating the very destruction we seek to stop. Firmly believing in human agency as protectors of the planet, we emphasize in this article the ethical responsibilities and duties of human beings towards other living beings. A prerequisite for determining 'good' forms of duties is a reconceptualization of security. In other words,

when the life of the Earth takes precedence over the survival of nation-states, the concept of security takes on dramatically different meanings and leads us to different paths. Sustainability necessary work can be introduced as a 'compulsory' safeguard measure for the well-being of the planet. In deliberating on the concept of 'necessity', democratic procedures and contestatory politics that extend beyond the community of 'abled' humans serve as key parameters for the legitimacy of implementing these works as duties.

In the title of this article, we posed the question: can the introduction of 'sustainability necessary work' promote security for all? In response, our answer is affirmative, but with some reservations: yes, but this requires a new security paradigm and a redefined political community.

References

Barry J (2005) Resistance is fertile: From environmental to sustainability citizenship. In: Dobson A and Bell D, eds. *Environmental Citizenship*. MIT Press, Cambridge, MA, USA: 21–48.

Barry J (2016) Citizenship and (un)sustainability: A green republican perspective. In: Gardiner S and Thompson A, eds. *The Oxford Handbook of Environmental Ethics*. Oxford University Press, Oxford, UK: 333–43.

Belcher O, Bigger P, Neimark B and Kennelly C (2020) Hidden carbon costs of the "everyday war": Logistics, geopolitical ecology, and the carbon boot-print of the US military. *The Transactions of the Institute of British Geographers* **45**: 65–80.

Bosselmann K (2016) *The Principle of Sustainability: Transforming law and governance* (second edition). Routledge, London, UK.

Boyd D (2017) *The Rights of Nature: A legal revolution that could save the world*. ECW Press, Toronto, Canada.

Claussen A (2021) Global disarmament to protect the climate. *Medicine, Conflict and Survival* **37**: 177–83.

Depledge D (2023) Low-carbon warfare: Climate change, net zero and military operations. *International Affairs* **99**: 667–85.

Duffy R (2022) Crime, security, and illegal wildlife trade: Political ecologies of international conservation. *Global Environmental Politics* **22**: 23–44.

Floyd R (2024) *The Duty to Secure: From just to mandatory securitization*. Cambridge University Press, Cambridge, UK.

Giddens A (1985) *The Nation-State and Violence*. Polity Press, Cambridge, UK.

Hwang J (2022) Building sustainable peace through the 'rights of nature' in Western societies: Case studies of New Zealand and Northern Ireland. *Journal of Human Rights Studies* **6**: 149–88.

McClanahan B and Brisman A (2015) Climate change and peacemaking criminology: Ecophilosophy, peace and security in the 'war on climate change'. *Critical Criminology* **23**: 417–31.

McDonald M (2021) *Ecological Security: Climate change and the construction of security*. Cambridge University Press, Cambridge, UK.

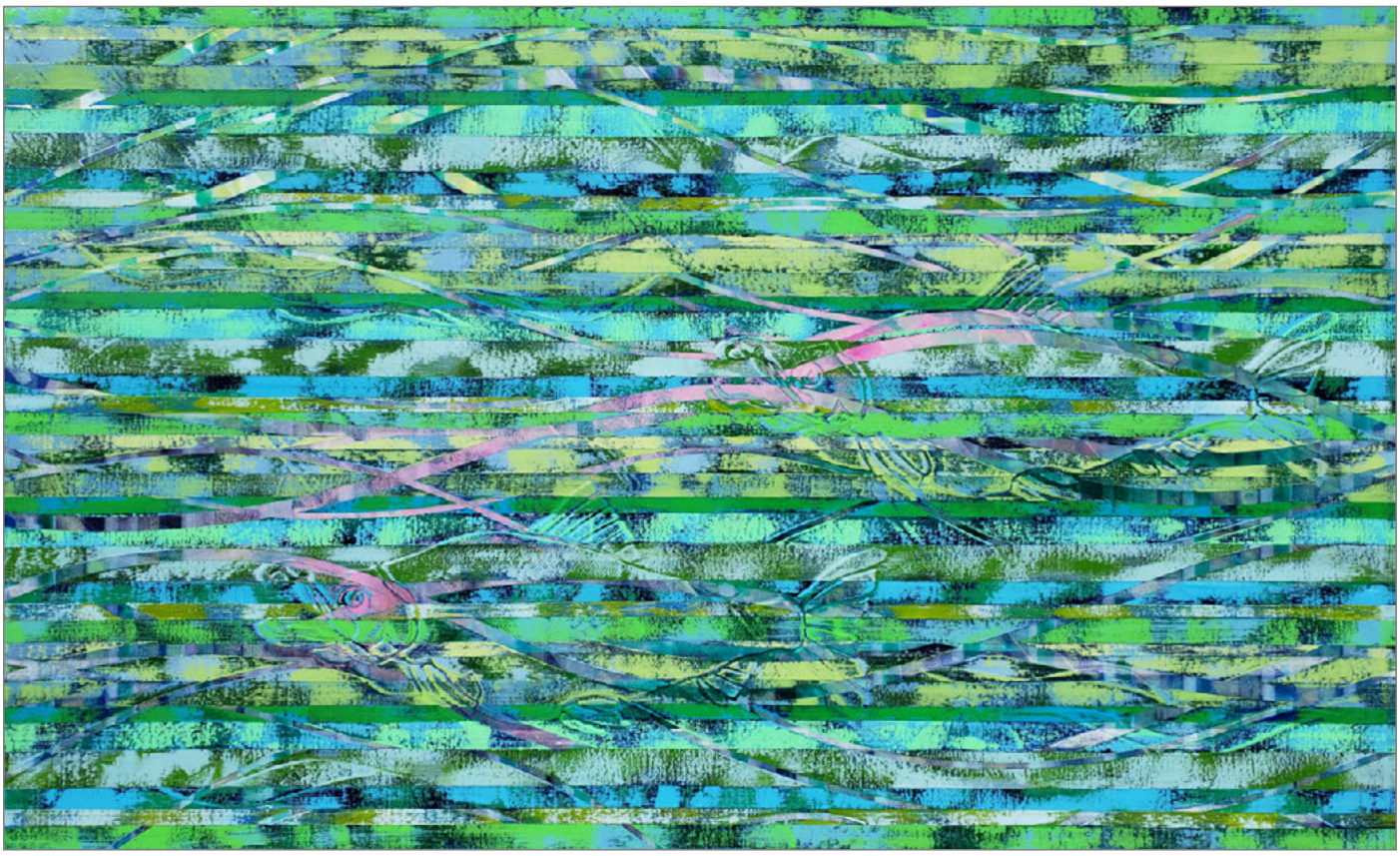
Mitchell A (2024) *Revenant Ecologies: Defying the violence of extinction and conservation*. University of Minnesota Press, Minneapolis, MN, USA.

Moore S and Roberts A (2022) *The Rise of Ecofascism: Climate change and the far right*. Polity Press, Cambridge, UK.

Ruggiero V (2023) Criminology against war. *Justice, Power and Resistance* **6**: 263–77.

Smith C and Lengefeld M (2020) The environmental consequences of asymmetric war: A panel study of militarism and carbon emissions, 2000–2010. *Armed Forces and Society* **46**: 214–37.

Tian N, da Silva D, Liang X and Scarazzato L (2024) Trends in World Military Expenditure, 2023. Stockholm International Peace Research Institute (SIPRI) Factsheet. Stockholm, Sweden. Available at https://is.gd/BXlkAw (accessed April 2025).



Reflections series:
Pacific Salmon
Dodd Holsapple
Mixed medium on canvas (40 x 60 inches; 2021).

From the artist: "This series concerns ocean awareness in terms of both threatened species and water temperature conditions. The works build from scientific data and graphs while exhibiting dimensional water and light representations embedding fish species into the artworks."

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Reflections series:
Pacific Orange Roughy
Dodd Holsapple
Mixed medium on canvas (48 x 68 inches; 2020).

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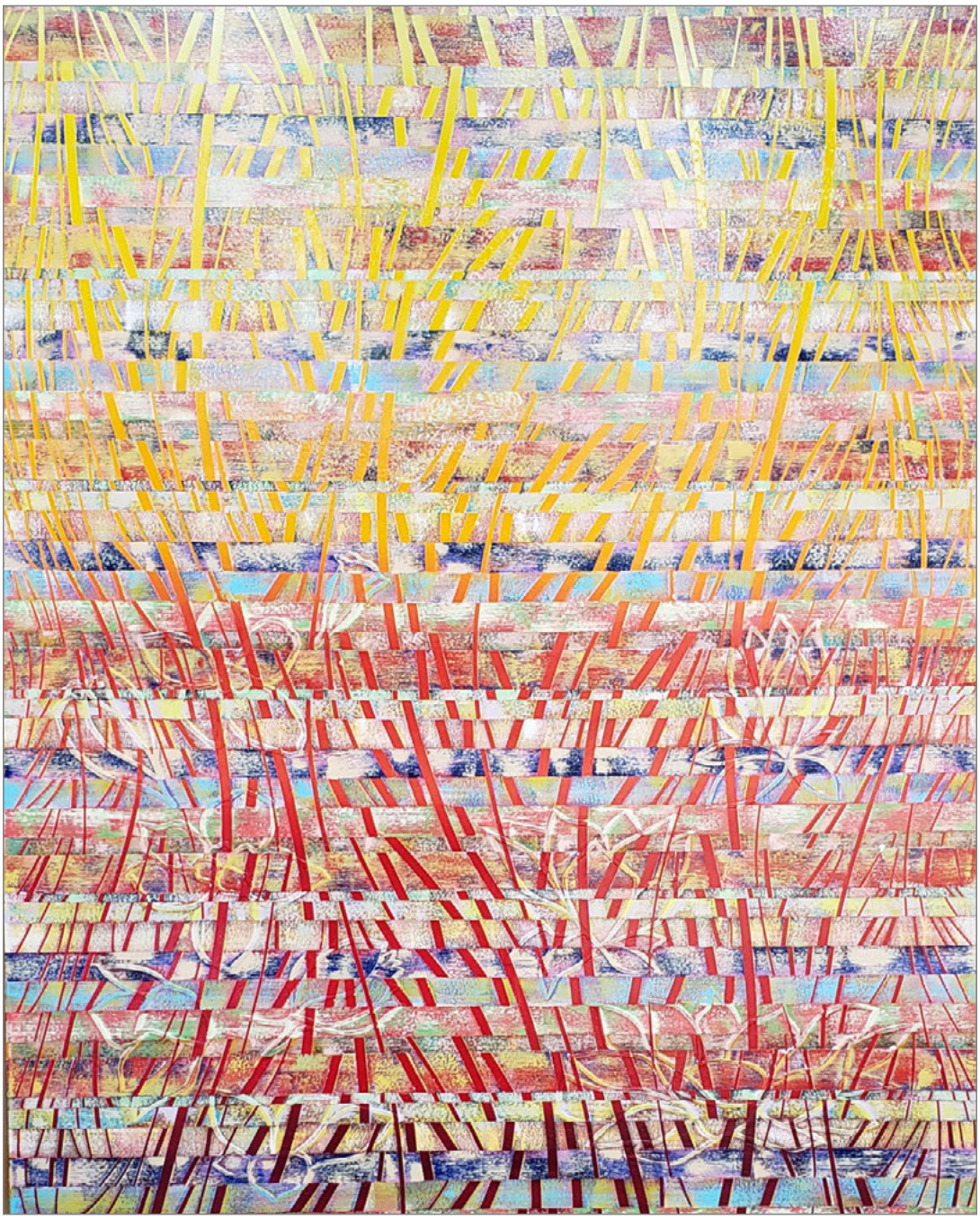

Flora Exotica series:
June 21st
Dodd Holsapple
Mixed medium on canvas (48 x 36 inches; 2023).

From the artist: "This series engages the beauty of rare flowers in form and colour. These works build incredible color impact with embedded organic forms depicting shapely moments in the garden. Creatively, these contemporary artworks recognise floral stewardship and botanical protection."

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Flora Exotica series:
Seven Lilies in Seven Colors
Dodd Holsapple
Mixed medium on canvas (40 x 60 inches; 2023).

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Rewilding as reparative and restitutive justice

Andrea Natan Feltrin

Natan, a PhD candidate at the University of North Texas, specializes in environmental ethics and multispecies justice. His work, rooted in his studies at the University of Milan and research on beaver reintroduction at the University of Stirling, focuses on rewilding and ecological coexistence.

This article argues that rewilding should be conceptualized as reparative and restitutive justice for the harm inflicted upon the more-than-human world by human supremacy. Extending the framework of social justice to ecological ethics will help to address the exploitation of ecosystems and other-than-humans. Rewilding must go beyond biodiversity restoration, and aim to dismantle human hegemony, restore autonomy to ecosystems and thus enable true multispecies coexistence.

Keywords: Earth jurisprudence; ecological restoration; rewilding; species reintroductions
Citation: Feltrin AN (2025) Rewilding as reparative and restitutive justice. *The Ecological Citizen* 8(2): 149–54.

Rewilding has become a widely recognized strategy and philosophy in environmental recovery, celebrated for its potential to restore ecosystems with a proactive mindset, offering hope in addressing biodiversity loss. Often defined as the reintroduction of keystone species and the large-scale restoration of landscapes to a more 'untamed' state – while not denying its application on smaller scales – it is viewed by many as a crucial tool for countering the relentless damage caused by human activities. Projects like the return of the European bison to Poland or the revitalization of wetlands in the Netherlands are frequently hailed as success stories in ecological restoration (Pettorelli *et al.*, 2019).

However, this framing limits rewilding to an instrument for ecosystem recovery, neglecting its deeper ethical imperatives. What if rewilding were understood not only as a solution to biodiversity loss but also as a form of *reparative and restitutive justice* for the moral and historical wrongs we have inflicted upon the more-than-human world? Reparative justice focuses on healing and repairing harm, whilst restitutive justice aims to restore what has been lost or taken. While this can be a significant legal and political distinction in a human context, in the context of rewilding the lines between restitution and reparation blur. Here, the ethical imperative is not only to compensate for

past harms but to actively enable the self-determination and flourishing of ecosystems and species. In this way, *giving back* means restoring the possibility for the autonomous unfolding of other-than-human individuals and collectives – and thus the acts of repairing and returning merge.

Ecological restitution

This article calls for a reconceptualization of rewilding as a form of ecological and multispecies restitution, grounded in a commitment to addressing the exploitation of ecosystems, species and individual other-than-humans by human supremacy. Historically, the concept of restitution has predominantly been applied within the realm of social justice, used to redress human-centric wrongs such as slavery, colonialism and Indigenous dispossession (Barkan, 2000). Extending this framework to include ecological ethics requires acknowledging that humanity, particularly through extractivist capitalism and colonial practices, has devastated not only human communities but also the living planet (Crist, 2019). Multispecies coexistence must reject human supremacy across all cultures, recognizing that nature – arguably the most severely marginalized and tyrannized entity on a planet dominated by more than eight billion humans – must be at the core of any justice discourse. Our ethical obligation goes beyond merely halting environmental harm; it necessitates actively restoring ecosystems and other-than-human species that have been violently diminished in richness, beauty and integrity. This entails restoring their capacity for flourishing, self-determination and autonomy (Woods, 2017).

In human contexts, reparative justice is a well-established ethico-political framework, particularly for addressing the legacies of slavery, colonialism and Indigenous dispossession (Domínguez and Figueroa, 2023). It often involves concrete actions, such as financial compensation or land restitution, aimed at repairing historical wrongs – not to erase the past but to create a fairer foundation upon which to rethink and re-envision a future together as a human community. The underlying principle is that those who have inflicted harm – or their successors – carry an ethical responsibility to repair the damage done, in order to create the possibility of justice in the present and for future generations. However, most discussions of reparative justice remain anthropocentric, focusing primarily on human relationships and human communities.

In recent years, scholars like Kyle Whyte have expanded the theoretical framework of reparative justice to include environmental justice, particularly in the context of colonial conservation practices. He critiques the history of conservation efforts that, while framed as protecting nature, have often perpetuated systems of domination (Whyte, 2024). Indigenous peoples were frequently displaced from their lands under the guise of protecting wilderness, severing the deep relationships they held with their ecosystems. This forced separation not only harmed Indigenous communities but also contributed to environmental degradation, as colonial practices disregarded the knowledge systems that had long managed these landscapes sustainably (Whyte, 2018). While social justice and ecological understanding have merged to create the

generative field of environmental justice – a field that has helped reframe conservation from a less Western perspective by acknowledging the role of stewardship – the entire discourse on conservation still risks remaining overly anthropocentric (Coolsaet, 2020). Shifting towards ecological restitution as an integral part of rewilding can bridge the gap between human-centred and more-than-human justice.

Rewilding, when reframed as ecological restitution, recognizes the deep interconnections between social and ecological justice without hierarchically placing the former above the latter. Reparations must go beyond restoring ecosystems to a so-called 'pristine' state; they must focus on giving back the possibility for the biological community to thrive spontaneously, with humanity as part of that community – not as a master, but as a keystone species. This distinction between humans acting as a keystone species and the concept of human supremacy is essential. While keystone species play a crucial role in maintaining ecological balance, human supremacy imposes a harmful, hierarchical relationship over nature. Viewing humans as a keystone species within a rewilding framework means recognizing our role in ecosystems as one that can enhance biodiversity and contribute to resilience, without assuming dominance or control over the broader ecological community.

The natural world has endured centuries of exploitation, and ecosystems themselves have been victims of human supremacy. To repair this damage, rewilding must aim for more than preserving biodiversity for human benefit or securing a 'sustainable' future under human hegemony (if such a future were even possible within ecological boundaries). Instead, human hegemony must be dismantled for a just multispecies coexistence. Rewilding must confront the historical injustices embedded in our relationship with the natural world, acknowledging how ecosystems and other-than-human species have been systematically exploited and marginalized. In a political sense, nature is often treated as the 'largest minority' – an oxymoron that underscores the paradox of how the vast majority of life on Earth is silenced and disregarded, its voice unheard and its agency suppressed under human supremacy.

The question of whether removing human influence entirely from certain regions would yield better outcomes for biodiversity is complex. While there may be cases where human absence promotes ecosystem recovery, rewilding does not necessarily require the complete withdrawal of human presence. Rather, it calls for transforming the nature of human engagement. Importantly, this does not imply that all human influence is inherently negative. Indigenous land stewardship offers a powerful counterpoint to the notion that all human presence leads to degradation. Indigenous peoples have historically practiced forms of coexistence that supported biodiversity, yet these practices differ fundamentally from extractive or colonial approaches. However, even acknowledging the value of sustainable human practices, it remains crucial to recognize that in some instances, the most ethical choice may be for humans to deliberately withdraw from certain areas. Such decisions should be based on the ecological needs of the land, not on the assumption that all spaces *must* be co-inhabited by humans. This withdrawal, however, must be just, with the

burden shared equitably and not disproportionately placed on those who have historically suffered from structural injustices.

For centuries, extractivist practices have inflicted harm on the natural world, treating it as a resource to be dominated rather than a community to be respected. Rewilding, therefore, should serve as a form of reparations, aimed not only at ecological restoration but at returning autonomy and agency to ecosystems and other-than-human species. By restoring the natural world's ability to thrive independently of human control, rewilding becomes an essential step in addressing these long-standing injustices (Taylor, 2013). This approach underscores the importance of acknowledging that humans, including Indigenous peoples, have played complex roles in both shaping and disrupting ecosystems. Humans have been implicated in past extinctions, such as those of the Pleistocene megafauna. Yet the focus should not be on assigning blame but on recognizing the diversity of human relationships with nature, some of which foster sustainability and resilience.

A powerful example of rewilding as restitution can be seen in the *Kulan Rewilding Project* in Kazakhstan (Kaczensky *et al.*, 2018). Once abundant across Central Asia, the kulan (*Equus hemionus*) – a subspecies of Asian wild donkey – was driven to near extinction by Soviet agricultural policies that transformed steppes into monocultures. This project is not solely about restoring the kulan as a species; it also addresses the broader ecological harm caused by industrial agriculture. By integrating Indigenous ecological knowledge and collaborating with local communities, the project acknowledges that the destruction of the steppe was both ecological and social, disrupting long-standing practices of balance with the land. In this way, rewilding serves as a process of both ecological and cultural reparation, offering a model for how multispecies justice can be achieved. However, while such isolated examples provide hope and demonstrate the potential of rewilding, they should be seen as stepping stones toward a much bolder and more ambitious restoration goal.

Multispecies coexistence cannot be based on current ecological baselines, which have been severely diminished due to centuries of exploitation. Even though 'ecological shifting baseline syndrome' can make us feel comfortable with moderate achievements in conservation and restoration, palaeontology reminds us of what has been lost because of *Homo sapiens*. Australian philosopher Thom van Dooren (2014) rightly points out that we should not view reality from a detached and timeless ecological standpoint, but from what he calls 'Cenocentrism' – recognizing that all life forms existing now are directly related to those that passed through the geologically recent bottleneck of the fifth mass extinction. This rich assembly of the Cenozoic community, which has been the cradle for our species, is now under threat of decimation because of humans. This destruction began with the megafauna extinctions and has continued into the present acceleration of ecological decline (Dawson, 2016). While we cannot turn back the clock to an imagined past, we must reject this baseline of destruction and address both the long history and present reality of ecological degradation. In this framework, rewilding is not merely about restoring biodiversity; it is about actively

confronting the systems of extraction and domination that have ravaged the natural world.

Rewilding as an ethical imperative

At the heart of reconceptualizing rewilding as ecological justice is the principle of giving back. This involves recognizing that ecosystems are not static entities to be 'fixed' by human intervention but dynamic communities that have been violently wronged. In thus reframing rewilding, we must prioritize restoring the autonomy of ecosystems and recognizing the agency of other-than-human species (Heyd, 2005). This goes beyond simply allowing species to flourish within human-managed parameters; it requires relinquishing human control and enabling ecosystems to regenerate on their own terms. Ultimately, rewilding must be understood not only as an ecological strategy but as an ethical imperative. The natural world has endured centuries of marginalization, treated merely as a resource for human exploitation. As such, nature must be recognized as the most severely discriminated against entity on this planet, and rewilding should be driven by a commitment to multispecies justice that must direct public opinion, policies and laws. This requires actively repairing the harm humans have caused and ensuring that ecosystems and species have the autonomy to thrive.

As the planet confronts dual crises of biodiversity loss and climate change, rewilding offers a pathway to a more just and equitable world for humans and other-than-humans. By embracing rewilding as a form of reparative and restitutive justice, we acknowledge our ethical obligation not only to halt the destruction of ecosystems but also to repair the relationships we have broken with the natural world. In doing so, we move beyond human supremacy and toward a future where humans and other-than-human species can coexist as equals in a shared planetary community.

References

Barkan E (2000) *The Guilt of Nations: Restitution and negotiating historical injustices*. WW Norton, New York, NY, USA.

Coolsaet B (2020) *Environmental Justice: Key issues*. Routledge, New York, NY, USA.

Crist E (2019) *Abundant Earth: Toward an ecological civilization*. University of Chicago Press, Chicago, IL, USA.

Dawson A (2016) *Extinction: A radical history*. OR Books, New York, NY, USA.

Domínguez L and Figueroa A (2023) Reparations at last: Land justice for Kenya's Ogiek. Briefing Paper. Minority Rights Group International. Available at https://is.gd/co1tbb (accessed January 2025).

Heyd T (2005) *Recognizing the Autonomy of Nature: Theory and practice*. Columbia University Press, New York, NY, USA.

Kaczensky P, Linnell J, Zuther S *et al.* (2018) Reintroduction of kulan into the central steppe of Kazakhstan: Field report for 2017. Norwegian Institute for Nature Research, Report 1459. Available at https://brage.nina.no/nina-xmlui/handle/11250/2494076 (accessed January 2025).

Pettorelli N, Durant S, and Du Toit J (2019) *Rewilding*. Cambridge University Press, Cambridge, UK.

Taylor P (2013) *Beyond Conservation: A wildland strategy*. Routledge, New York, NY, USA.

Van Dooren T (2014) *Flight Ways: Life and loss at the edge of extinction*. Columbia University Press, New York, NY, USA.

Whyte K (2018) Indigenous climate change studies: Indigenizing futures, decolonizing the Anthropocene. *Wiley Interdisciplinary Reviews: Climate Change* **9**: e510.

Whyte K (2024) Why does anything need to be called wild? In: Minteer B and Losos J, eds. *Heart of the Wild*. Princeton University Press, Princeton, NJ, USA.

Woods M (2017) *Rethinking Wilderness*. Broadview Press, Peterborough, ON, Canada.

Quiet, Listen

Belinda Chlouber

Mixed media with gold leaf on paper (22 x 30 inches; 2019).

From the artist: "I have long been fascinated by trees and their quiet, enduring strength. This piece speaks to our need to listen and observe nature more carefully."

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Breath of Color

Belinda Chlouber

Mixed media with gold leaf on paper (22 x 30 inches; 2018).

From the artist: "In this piece, I have symbolically breathed life into the plants, the bees and all those creatures and plants we depend on for survival. To care. To garden in a way that is in harmony with life."

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Pressed

Belinda Chlouber

Mixed media on paper (22 x 30 inches; 2024).

From the artist: "I grew wildflowers in my yard, pressed them, and then was inspired to paint them. The footprints in the background are from my shows. The blue bird at the top represents the blue bird of happiness, symbolising that, together, we can work to repair and replenish our world."

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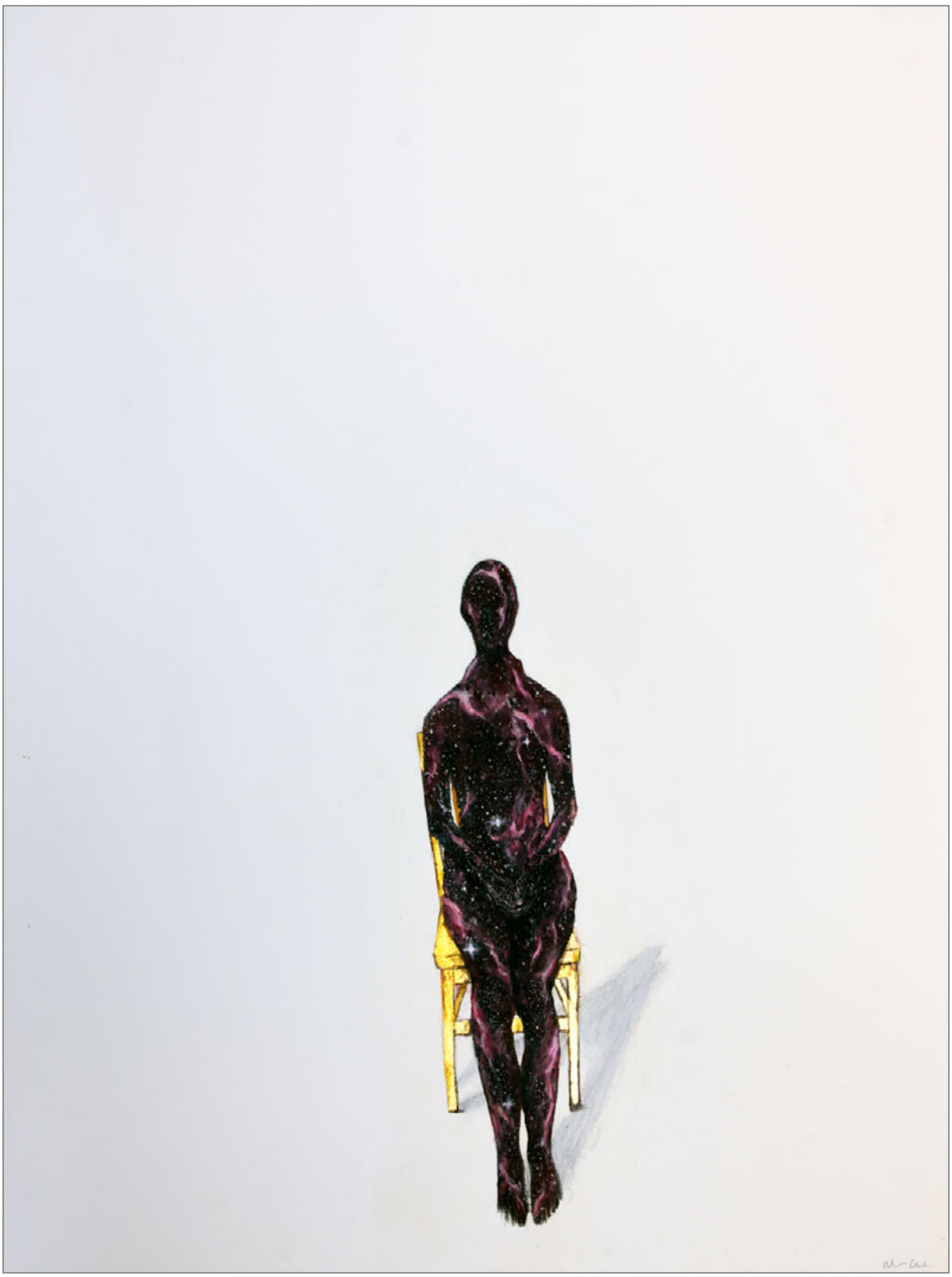

All Possibilities

Belinda Chlouber

Mixed media on paper (22 x 30 inches; 2021).

From the artist: "I wish for and dream of a planet in ecological balance and a people who cherish it – all possibilities exist if we work toward that reality."

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Witnessing other times: An ecological calendar and a practice of ecological attention

Nora Ward and Amber Broughton

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In this essay, an environmental philosopher and visual artist engage with the temporal experiences of nonhuman others through the creation of an ecological calendar. The calendar project is informed by both an acknowledgement of the ethical importance of attention and connection to the natural world, and the awareness of the coexistence of multiple and multispecies timescapes. Ultimately, the essay maintains that the human domination of ecological systems is both spatial and temporal. Decentering the human as the only makers and markers of time can thus create potential opportunities for more relational, integrated and mutually beneficial rhythms and habits.

Keywords: ecological empathy; environmental humanities; worldviews
Citation: Ward N and Broughton A (2025) Witnessing other times: An ecological calendar and a practice of ecological attention. *The Ecological Citizen* **8**(2): 159–67.

"We want to ask
'How can you live here?'
But we drive fast
past their answer
our attention always
ahead of us."
– Brewer (2006)

This essay is a multidisciplinary – philosophical and visual – attempt to engage with the diverse temporalities of nonhuman others. In line with Michael Lipscomb's contention that it is necessary to interact with "different temporal registers" (2011: 284) in order to respond effectively to complex ecological crises, we develop a theoretical and practical consideration of how

to develop different rhythms in relation to non-dominant and non-anthropocentric timescapes. We first conceptually outline the context and significance of temporal mismatches between humans and nonhumans. We then offer a response by highlighting an artistic project based in the Beara Peninsula in the West of Ireland which presents a nature-focused alternative to traditional forms of time-keeping by developing an ecological calendar that emerges from a practice of local, place-based attention.

Temporal homogeneity and temporal mismatches

It is intuitive to associate ecological crises with their spatial dimensions, for example, habitat destruction, plastic pollution, and rising sea-levels. Yet there are also less recognized temporal aspects. Changing temperatures affect not only ecosystem quality, but also when, and at what speed, species and individuals move or do not move. As healthy multispecies relationships depend upon coevolved rhythms and temporal synchronicities, large-scale, rapid shifts in timing can be disastrous. When temperature shifts cause caribou to arrive at Arctic feeding grounds too late to take advantage of high vegetation growth, for instance, their likelihood of survival is significantly reduced.

These individual cases of mismatch also point to a causal factor underlying contemporary environmental issues. Namely, that the temporal experiences of many dominant human cultures are disconnected from nonhuman experiences. This is apparent in the case of climate change, in which the longer-term and slower impact changes required for amelioration are in conflict with the shorter-term structures and motivations of political and social institutions. It is also witnessed more concretely in less abstract examples. Roads, for example, present not only an example of spatial domination of the landscape, but also a temporal one. The speed of cars clashes with the pace of many species, resulting in the death of billions and trillions of animals and insects annually.

The particularly accelerated mode of dominant human life that underlies these a-synchronicities can be traced in part to the fossil-fuel transition of the eighteenth and nineteenth centuries and the related escalation of capitalist economies. The industrial revolution constituted a break which allowed for both resource extraction at a degree far beyond what had been previously possible, as well as an augmentation of a temporal logic informed by a forward-focused ideology of continual and linear productivity. In contrast to a once-prevalent human experience of time as cyclical, contextual and relational, what Katherine Hunfeld (2022) calls the "dominant linear-progressive paradigm" saw a view of time emerge as something to be used, controlled and manipulated. Under this broader logic, the past was undermined as a source of epistemic value and a sense of the deep future was supplanted by a fast-paced presentism which aligns with the rapid rewards of capitalist markets.

As Michael Serres contends in *The Natural Contract*, modern times can thus be perceived as one of "short-term obsessions" (1995: 31). And, like Erin Fitz-Henry (2017) maintains, drawing on Serres, this inherited presentism even pervades much of environmental discourse, which can often downplay insights

learned from the past and be motivated by a goal-directed urgency that undermines slower responses. As such, the phenomenon of 'shifting-baseline syndrome' – where past ecological abundance and species diversity is forgotten – may not stem from individual failure but rather from a cultural loss of memory resources.

It is from the acknowledgment of temporal misalignment and dominance that we can therefore contextualize the growing calls to find *other* tempos, particularly ones that can "disturb the tempos of our time" (Lipscomb, 2011: 302). Attending to the temporal diversity and heterogeneity of other cultures, species, individuals and lifeforms can challenge frameworks which converge upon particular human experiences and flatten or demote others, and, in turn, open up opportunities for instances of acknowledgment and appreciation. Furthermore, it may also elicit a recognition of the points of continuity and integration that already exist. As Barbara Adam maintains, for example, human rhythms never were, nor can they be, divorced completely from nonhuman rhythms, and are always entangled through "hierarchical nesting and implication, with enfoldment and resonance" (1998: 162). This is perhaps precisely the lesson of climate change: the enmeshment of geological and human time and the temporal inescapability of natural processes in more general terms.

Towards the goal of making other times visible, important work has been done in highlighting Indigenous ecological calendars which offer valuable counter-imaginaries to the Gregorian calendar and confront colonial notions of simplicity or ahistoricism in Indigenous temporal experiences (*cf.* Hunfeld, 2022; Rozzi *et al.*, 2023). There is also a value in more explicit ecocentric approaches which centre the diverse temporal realities of nonhuman others and are open to the rich, agential nature of these alternatives. As Michelle Bastion and Rowan Bayliss Hawitt (2023) contend, the discipline of phenology – the study of life-cycle timing across species – can offer important insights here. Engaging with the rhythms and temporal experiences of, and across, species can serve to integrate human communities into their ecological relations, an experience that has normative repercussions. In particular, it encourages, as reflected upon by the authors of a project on the temporalities of kombucha SCOBYs (or 'mothers'), a destabilization of a "human-centered positionality," and consequently a "better relational multispecies understanding of temporalities based on care" (Bell *et al.*, 2024: 2).

One possible issue here though is a lingering assumption that animals and other nonhumans simply do not have anything to teach us as their temporal experiences are inferior or less complex than ours. Indeed, there is a commonly accepted view that animals, unlike humans, do not have the capacity to think about the past or wonder about the future. Termed the "mental time travel hypothesis", the assumption is that it is only humans who can consider the past and future, whereas animals and other nonhumans remain stuck in an eternal present (Suddendorf and Corballis, 2007). While this theory is increasingly challenged, the hypothesis may fail to pass even basic common-sense perception in the first instance. Barn swallows, for example, migrate

thousands of miles to the African continent for the winter and then often return to the exact same nest site in northern Europe for summer breeding. If the site is disrupted, they will find a new site to build a nest to which they will return in future breeding seasons. Likewise, squirrels, jays and many other species plan for the winter and store food, remembering the location of multiple caches. Birds decorate nests in anticipation of breeding and incorporating the aesthetic preferences of potential partners. While these examples of remembering the past and anticipating the future are sometimes chalked down to a mindless playing out of instinct, such an explanation is harder to justify when there are increasing examples of creative adaptation in which species can alter the timing or nature of these rhythms in response to habitat and climate-related disruption.

What might therefore be necessary, in light of this broader tendency towards reductionism, is to cultivate experiential practices of attention that do not categorize, simplistically compare, differentiate or immediately intellectualize. In this regard, insights can be gleaned from ethical frameworks which highlight the potential of attention to initiate affective experiences which disrupt the ingrained conceptual dichotomies which separate human and nonhuman worlds. For Iris Murdoch, proper attention is synonymous with love insofar as it elicits a perception of the other beyond narcissism and internal illusion and bias (*e.g.* Murdoch, 1971). Similarly, as Nel Noddings (2010) has argued, attentiveness can generate experiences of empathy which challenge habits that separate one's own needs and desires from those of others. This is a point that environmental philosopher Tom Birch (1993) also highlights in relation to the natural world more broadly, as he contends that a generous attentiveness to "others of all sorts" can confront fictional anthropocentric assumptions of human superiority and create pathways for reciprocity and relationality.

It is informed by this understanding of the ethical significance of attention, as well as the need to witness and think along with multispecies timescapes and temporal experiences, that the rest of the essay will centre a practical example by highlighting an artistic ecological calendar project based in the Beara Peninsula on the southwest coast of Ireland. In the following section, the artist, Amber, provides reflections on her intentions behind – and ongoing process of – creating a nature-based calendar that offers an alternative to dominant forms of time-keeping. While the focus here is on the creative task of the calendar itself, it is envisioned that the insights and practices gleaned can be adopted in a variety of other contexts.

Artist's reflections

The idea and practice of the ecological calendar

The aim of the ecological calendar is to present a place-based and nature-focused alternative to the Gregorian calendar. The project consists of continuous and time-sensitive research, documentation and drawing. Instead of using words and numbers, the ecological calendar brings forth images of surrounding living creatures and plants in various stages of their life and

seasonal cycles. I record my encounters with flora and fauna in the form of detailed colour pencil drawings on an expansive white background. I see these subjects as time markers, crossing paths with me at particular times of the seasonal year and indicating environmental change and the passing of time. I envision around twenty-four drawings in chronological order, displayed in a way that emphasizes the diverse expressions of the natural environment along a somewhat structured path. To honour the intention of reframing my own experience and understanding of time, I have not imposed a strict schedule or completion date for the calendar. I want instead to let go of expectations of productivity and allow a more organic rhythm to be revealed.

The habit of noticing, connecting, remembering and analysing the encounters with my local natural spaces has extended beyond the calendar practice and is increasingly a part of my everyday reality. Recently, I observed a female blackbird shelter from the late summer rain under the roof of my art studio. I see her morning, noon and evening now. I suspect that her chicks have fledged and she is spending time away from the nest, resting and feeding herself before the colder season starts. The warm temperatures and developed foliage around the landscape mean that there are many earthworms and insects, along with softening berries and fruits in the garden.

This practice does not end at the observation of my external environment. It also encourages me to observe and reflect in a deeper way. I consider the questions: how might I relate to the behaviour of this blackbird in this particular moment? Can I see a part of myself in her behaviour, longing to rest and recuperate after putting so much effort into something? Through observing the blackbird, can I better recognize a time for action and a time for recovery? I watch her sit still on a patch of dry concrete, her feathers puffed up, keeping herself cosy. She rests and waits for the rain to stop.

The small tortoiseshell butterfly

The first calendar entry is a butterfly with its wings closed. More specifically, it is a small tortoiseshell butterfly (*Aglais urticae*), a familiar winter house-guest, usually found in the back of a wardrobe or the dark corner of a room, motionless in hibernation, waiting for the springtime to come. The experience of coming across the hibernating creature comes with the smell of dusty and damp places, and more recently with the feeling of a warm cosy home when it's cold outside. Searching the back of the wardrobe for warm winter clothes is often the time when our paths cross.

I approach this interaction as an expression of our temporal realities, the butterfly finding a dark corner to sleep away from the cold, and also my own seasonal habits of keeping warm, both of which lead to this intersection. This experience of time is not abstract, but rather has a smell, a taste, a temperature. It is my memory of it occurring periodically that defines it as an indication of the passing of a seasonal, cyclical time. This embodied manner of time-tracking is rich and nourishing. It allows me to better recognize that other lives exist parallel to mine and to understand that their movements are also informed by our shared environment. I am part of their world and their

story as they are a part of mine; we are a witness to each other's lives and thus connected to each other's rhythms. Recognizing and experiencing these synchronicities is an important step in learning how to participate mindfully in the stories of others, to move with ecological currents bigger than just my own.

The chanterelle

Another entry is a golden chanterelle mushroom (*Cantharellus cibarius*). The autumn provides a symphony of colourful, intriguing mushroom appearances. Mushrooms are fantastical in their appearance, and so biologically and chemically intertwined with the soil that they could be considered its extension. In my attention to mushrooms for the project, I find myself learning a lot about the various fungi growing around in my local place, and consequently learning more about my local place. Just like the trees communicate, mushrooms also communicate. A particular mushroom species can provide information about soil quality and type, the presence or absence of different tree species in the areas, weather patterns and temperature, land use, animal presence and more. Chanterelles, in particular, like to form symbiotic relationships with trees such as birch, beech and oak. A so-called good chanterelle year is usually one with heavy rain interspersed with periods of hot weather. Attention to chanterelles can thus reflect not only the "when" (the time of year), but also the "where (am I)", "what (happened)" and "who (else is here)".

The appearance of mushroom species above ground are often very short-lived. As a result of this, they stand as an archetype of impermanence, a

physical expression of the environment in a specific, transient state. Engaging with mushrooms helps me to challenge straight-forward, linear notions of time, and even to complexify a sense of time that is presented as neatly cyclical. Mushrooms sometimes fruit and sometimes don't. Encountering a particular mushroom above ground is rarely a given; it cannot be predicted with certainty. Whether or not it happens itself tells a particular story.

Final reflections

In this project, I am asking the natural world, and specifically, my place, to show me what time of year it is, and it is my prerogative to listen. It is not always easy to listen or understand. However, I chose this mode of time recording as it grounds me in the diverse and textured reality of my existence. I can experience time through multisensory interactions with more-than-human others and worlds. I can smell, hear, touch and taste the movement of time. As an embodied observer attending to other embodied observers, these temporal interactions are reciprocal and formative: in my own witnessing, I am being witnessed back.

A primary motivation for this project was personal. I had come to accept that the pace I had been living my life was becoming increasingly detrimental to my health. I asked myself: how would I like to live? What would feel right in my body and give me ease, in contrast to the stress and sickness that I was then

experiencing? In our culture, it is often assumed that humans are the most intelligent species, but when I observe plants, mushrooms and other creatures, I wonder if that is really the case. The nonhuman others who I have been attending to are not bound by human concepts of hyper-productivity or cultural expectations relating to career or financial success. To learn another way, this is therefore where I had to begin: turning attention outward, noticing my surroundings, and taking the focus off the human as the centre of my world.

While the project was personal, there is also a more general political and collective focus at its heart. Any individual attempt to decentre the human involves a broader statement about what and who has importance and value. As Robin Wall Kimmerer states, "paying attention acknowledges that we have something to learn from intelligences other than our own" (2013: 300). Attending closely to other beings can reveal the limitations of a homogeneous and narrowly anthropocentric perspective by revealing the fullness and independence of other lives. This can not only present models and alternatives to dominant human experiences, but also, and most notably, provide opportunities for expressions of mutual ecological flourishing and care in which a diverse range of parties are acknowledged and witnessed.

Concluding remarks

Conceptualizing the ecological calendar project along these lines conjures the concept of 'mixed communities' that appears in the work of philosophers such as Mary Midgley (1983) and Arne Naess (1979), albeit in different ways. In a mixed community, the aim is not to collapse differences, but instead to generate shared realities in which interrelation, continuity and discontinuity are recognized, and in which members, human and nonhuman, co-participate. This philosophical framing connects to sound ecologist Bernie Krause's findings (2012) that the vocal co-inhabitants of an ecosystem do not sing on top of each other, but instead occupy their own sound niche. In each case, there is a constructive place for difference as the source of harmony, and an understanding that each distinct voice has a value in its own right.

The focus on temporality, which has been the central interest both in this essay and calendar project, may be especially fruitful in further rethinking imaginaries around this idea. Intentionally witnessing other rhythms can not only aid in recognizing the richness of other lives, but also enable and motivate responsive change. As Cosmo Sheldrake writes in a recent project which involved co-produced music with humans and an Ecuadorian cloud forest, a healthy soundscape community is one in which every participant can "communicate and vocalise without drowning each other out, leaving space for each other both in time and frequency?" (Sheldrake, 2024). To carry along this spirit, we therefore ask in conclusion: how can we keep open the possibilities of making good time with other beings?

References

Adam, B (1998) *Timescapes of Modernity: The environment and invisible hazards*. Routledge, New York, NY, USA.

Bastion M and Hawitt R (2023) Multi-species, ecological and climate change temporalities: Opening a dialogue with phenology. *Environment and Planning E: Nature and Space* **6**: 1074–7.

Bell F, Coffie J and Alistar M (2024) Bio-Digital Calendar: Attuning to nonhuman temporalities for multispecies understanding. Proceedings of the Eighteenth International Conference on Tangible, Embedded, and Embodied Interactions. Available at https://is.gd/pAOluZ (accessed May 2025).

Birch T (1993) Moral considerability and universal consideration. *Environmental Ethics* **15**: 313–32.

Brewer K (2006) Sheep. In: *Why Dogs Stopped Flying*. Utah University Press, Salt Lake City, UT, USA.

Fitz-Henry E (2017) Multiple temporalities and the nonhuman other. *Environmental Humanities* **9**: 1–17.

Hunfeld K (2022) The coloniality of time in the global justice debate: De-centering Western linear temporality. *Journal of Global Ethics* **18**: 100–17.

Kimmerer R (2013) *Braiding Sweetgrass: Indigenous wisdom, scientific knowledge, and the teachings of plants*. Milkweed Editions, Minneapolis, MN, USA.

Krause B (2012) *The Great Animal Orchestra: Finding the origins of music in the world's wild places*. Little, Brown and Company, New York, NY, USA.

Lipscomb, M (2011) Adorno's historical and temporal consciousness: Toward a critical theoretical environmental imagination. In: Biro A, ed. *Critical Ecologies: The Frankfurt School and contemporary environmental crises*. University of Toronto Press, Toronto, ON, Canada: 278–311.

Midgley M (1983) *Animals and Why They Matter*. University of Georgia Press, Athens, GA, USA.

Murdoch I (1971) *The Sovereignty of Good*. Routledge and Kegan Paul, London, UK.

Naess A (1979) Self-realization in mixed communities of humans, bears, sheep, and wolves. *Inquiry* **22**: 231–41.

Noddings N (2010). Complexity in caring and empathy. *Abstracta* **5**: 6–12.

Rozzi R, Álvarez R, Castro V *et al.* (2023) Biocultural calendars across four ethnolinguistic communities in southwestern South America. *GeoHealth* **7**: 1–28.

Serres M (1995) *The Natural Contract*. University of Michigan Press, Ann Arbor, MI, USA.

Sheldrake C (2024) Song of the cedars. Available at https://is.gd/yE9fBk (accessed May 2025).

Suddendorf T and Corballis M (2007) The evolution of foresight: What is mental time travel, and is it unique to humans? *Behavioral and Brain Sciences* **30**: 299–313.

Close-up

Earth Time Loop

Angela Ka Ki Lee, Studio HAAU with artist Roberto dell'Orco

Art installation, co-construction and exploratory drawings (2020).

From the artist: "Earth Time Loop is an installation and material narrative, situated on a post-industrial site in transition. The work begins with the land: a research-led engagement with local soils, from toxic industrial residues to fertile garden plots and regenerating landscapes. Using materials gathered on site, the artists constructed a rammed-earth structure through participatory workshops. The installation reclaims the traditional rammed-earth technique and fuses it with post-industrial debris – such as charcoal waste from an old power plant – to create a new aesthetic of layered undulations. Industrial detritus meets hand-crafted forms, and this tension becomes visible in the architecture itself."

Higher-quality versions of artwork from this issue: https://www.ecologicalcitizen.net/artworks.php?v=8&n=2

The gifts of fiction at the time of climate emergency

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Narrative fiction is an underappreciated tool for seeding ideas about transformational change. Although fiction cannot replace action, stories are the oldest human technology for shaping beliefs, emotions and attitudes that inform our responses to real-life situations. Today's audiences often feel trapped in a degenerative, extractive socio-economic system that makes us complicit in the destruction of our planetary home. But it doesn't have to be this way. Stories can also offer tools for imagining a different trajectory, empowering us to turn the emergency into an emergence. This article outlines three gifts of fiction relevant for our times: insight (into the present moment), metaphors (to think with) and agency (to envision ourselves as change-makers).

Keywords: climate change; environmental humanities; societal change; values
Citation: Oziewicz M (2025) The gifts of fiction at the time of climate emergency. *The Ecological Citizen* 8(2): 174–9.

In the last pages of Eleanor Catton's ecothriller *Birnam Wood* (2023), billionaire Robert Lamoine assures himself of impunity. Lamoine had just committed the worst ecocidal heist in New Zealand's history: he illegally extracted rare earth minerals from a national park, poisoning its entire ecosystem, and covered the mining operation as a construction project for a doomsday bunker he was allegedly building on a farm bordering the park. Now that the operation has been discovered, Lamoine is wrapping things up:

> *He knew that once the rare-earth elements were in his hands, no government of any country in the world was really going to care how he had gotten them – and that included New Zealand. Sure, there might be a bit of knuckle-rapping, a few warm words [...] but so long as there was a phone in everybody's pocket, so long as there was a screen in front of every face, so long as there were batteries and satellites and cameras and GPS, so long as there was avarice, so long as there was loneliness and envy and ambition and boredom and addiction, he, Lamoine, would be untouchable. [...] He would even be hailed as a liberator: the man who*

> *bravely faced down China and secured technological independence for the West. (p 399)*

As happens in classical tragedies, in the moment of almost ultimate triumph, Lamoine falls. He is shot dead by an old woman whose husband he had murdered. He will never be the richest person alive or anyone's liberator. This ending is no consolation, of course. The irreparable damage Lamoine created will remain New Zealand's burden for centuries to come.

Among many gifts of Catton's multilayered novel is a nuanced representation of the extractive ecocidal logic that accelerates the climate catastrophe. Unless you are a lawyer engaged in a protracted battle against ecocidal lobbies or an activist on the ground, few of us have any chance to grasp the insidiousness of the ecocidal system at the heart of our petronormative civilization. Next to direct experience, stories are the best tool to help us learn about how the ecocidal machine works. Stories can also show how to disrupt the system and what we can do to accelerate a transition to an ecological civilization. This insight is foundational to the environmental humanities and is now being recognized by climate scientists. As Mann (2024) remarks, to tackle the climate crisis we must "find compelling narratives that are engaging and motivating, narratives that convey both *urgency* and *agency*" (p. x).

In this reflection I want to talk about three gifts of fiction at the time of the climate emergency. The first gift is *insight*. The other two are *metaphors* (to think with) and *agency/community* (to envision yourself as a change maker). Most stories, of course, will offer all three and more, but I want to unpack each gift as a separate process using three narratives as examples.

More than anything else, *Birnam Wood* offers insight. The insight is into how extreme wealth has become a key driver of ecocide: one that legitimizes and accelerates human creativity toward planetary destruction. In the name of wealth for the few, the possibilities of liveable futures for human and nonhuman life are being rapidly eroded. This paradox of the modern industrial petro-civilization is not merely inconvenient. It is also resisted by the twin forces of belief in economic growth as a solution and the dominant institutional discourse of "normalized denial" that "help frame an atrocity in process as business as usual" (Zimmerman, 2022).

Despite this resistance, the realization of how extractivist wealth concentration is destroying the planet's life-supporting integrity has been increasingly central to discussions about the climate emergency. The climate catastrophe is a symptom of a larger Earth overshoot created by the extractive logic of capitalism. An exponential acceleration of the climate crisis has by now been correlated with the exponential rise of wealth inequality and the rise of a billionaire class which currently stands at just below 3,000 individuals. This is why, over the past few years, climate justice has emerged as the key framing for addressing this problem. Although entirely fictional, *Birnam Wood* offers a more emotionally engaging insight into the complexities, causes and outcomes of carbon inequality than any policy report. It is likely to reach a much wider audience too.

The second gift of fiction is metaphor. The title of *Birnam Wood* is a good example again, even though Catton uses it only as a name of the eco-rebel collective. Pulled from *Macbeth*, Birnam Wood has larger metaphorical resonance too: it stands for the inconceivable that one is warned will ensue unless one changes one's course. For Macbeth, the inconceivable was Birnam Wood approaching the castle, marking the end of his tyrannical reign. For our times, Birnam Wood would be the climate collapse: a human-caused collapse of the stable Earth system we have been warned about but have taken no real steps to prevent. Except that when it starts cascading down our economic, political and social systems, the price will be paid by all forms of life on Earth, not just humanity.

The search for the best metaphors to live by and think with has been central to environmental and climate advocacy since its earliest days. Rachel Carson's opening fable in *Silent Spring*, for example, builds on the metaphor of pestilence to communicate the multiple and interrelated effects of environmental pollution. Other metaphors have been proposed over time, in activism as well as fiction. The warning ones include extinction, the Great Unraveling, a train heading toward a cliff, or humanity as a virus, a fossil fuels addict, or a species at war with the planet. Positive metaphors have been crafted too. The most successful ones include Greta Thunberg's cathedral thinking, transition to an ecological civilization as a moonshot – seemingly out of reach yet ultimately possible – the Green New Deal, Marshall Plan for the Earth, and our finest hour. Indigenous and ecofeminist thinkers have disseminated even more ecocentric identity notions, such as Water/Earth Protectors, intergenerational and interspecies kinship, and We Are Nature.

Metaphors matter because they provide narrative containers for our values, worldviews, self-images and goals. Metaphors shade into realities and share the same operational space with them. What is believed is what is sought. What is sought is often realized. Each metaphor casts us in specific roles. It brings a set of assumptions about our circumstances and agency – assumptions we can also contest and redefine. Metaphors to think with are another gift that fiction helps us notice.

One of the most inspiring metaphors for the time of the climate emergency is a journey. Any journey consists of multiple beginnings and ends interlaced on a continuum where each end can mean a new beginning. Such is the case in Oliver Jeffers's *Begin Again: How we got here and where we might be going – Our human story, so far* (2023a). *Begin Again* is built entirely on the metaphor of journey and especially on the key question confronting humanity at this juncture: where do we go from here? This future-oriented beginning is couched in a reflection on the three tentative beginnings of the humanity's journey: with fire as a technology, with human hands that enabled all other developments, and with the emergence of life, including the human species, from the world's oceans.

As species on a forever-journey, Jeffers asks, where do we *want* to go? The middle part of the story looks at where we actually are, "on this dry land, where we've always been" (p 20). Our present, the narrative notes, is divisive, exploitative and destructive. Here Jeffers introduces two oft-quoted metaphors:

a competitive, suicidal race to "we don't know where" – illustrated by a group of blindfolded humans running toward a precipice (p 33); and an equally suicidal self-sabotage of "burn[ing] the ship we are sailing on" – illustrated by a half-burned ocean liner (p 43). Sandwiched between these two paths is the alternative vision represented by a glorious sunrise – the metaphor for a new beginning – in which "we find new ways of using the old ways: the heat from the stars, the movement of air and water, using what we find near us to make with the future in mind" (p 40) – all of this "for purpose and love" (p 41). This metaphor soon transitions into an image of spaceship Earth: "Wherever we go, we all go together, so all of us must see we are no longer just passengers on this ship. We are its only crew, we each have a part to play" (p 45).

Having outlined the ecocentric goal, the narrative asks: "how do we get there?" (p 48). Jeffers's tale stresses that the new journey must start with creating "better stories, bigger ones, where we all fit inside the same powerful plot" (p 49) in which "we think beyond our own lifetimes" (p 50). This is how Jeffers leaves the reader at the end of the book: primed, through a set of metaphors, for confronting the climate emergency as a collective journey in which "wild beauty" and hope can be discovered "wherever you look for it" (p 52).

The third gift of fiction is a sense of agency and community. This gift is linked to the work of metaphors, including in *Begin Again*. Jeffers addresses it directly in a video teaser for the book when he talks about humankind as "cooperative species [...] driven by stories". *Begin Again*, he says, was created "using navigation terms" so that it can possibly be "a key you can get inside yourself and turn the steering wheel a bit by creating better stories". These guiding metaphors, in turn, Jeffers envisions as tools of change: "I want people reading this book [...] to feel galvanized that it's possible, that we're not all doomed, and that they have a role in whatever this unwritten future is" (all quotes from Jeffers, 2023b).

To be galvanized and inspired to believe that a different future is possible is perhaps one of the biggest challenges for anyone living today. Although stories cannot replace action, they are the most advanced human technology for inspiring change, empowering ecocentric positions and giving us "an idea of where we fit in the long line of time" (Jeffers, 2023b). This gift of agency and participation in a larger community of life comes to the fore in a number of recent narratives, especially in works of ecocentric, planetarianist fantasy that assert our kinship with all life.

Brian Selznick's graphic novel *Big Tree* (2023) offers the gifts of agency and community through a story of nonhuman characters whose struggles may not be that different from our current predicament. The protagonists are two Sycamore seeds, Louise and Mervin. They live through the Cretaceous/Paleogene extinction event 66 million years ago, which wiped out three quarters of the plant and animal species. They start in a seed pod in their Mama tree. They travel the world when the pod is released, meeting different life forms – including the mysterious Old One: Planet Earth. Eventually, Louise grows into a massive tree while Mervin is stuck in a rock crack for centuries. When they meet again, one sibling is a mature tree, the other still a seed. The

book ends with another tree child sapling, picked by a human child from a crack in a sidewalk, and transplanted into a pot to grow into the future.

Selznick's work does not offer cheap hope or a promise of success. What the story centres, though, is the ecocentric thrill of belonging in a larger community of life and the responsibility we all have to stand for life every step of the way. Without any direct calls to action, the book's cultural work is a message about everyone's responsibility to do our part to stop, contain and mitigate destruction.

Louise and Mervin learn this from their adventures. Louise is the first one to tune in to the voice of the Old One. For Mervin, this realization takes centuries, but he eventually starts hearing the Earth too. And this is what he learns in one conversation:

> *"Do you really think we can save you?"*
> "Mervin, I'm not sending out the message for myself."
> *"You're not? But aren't you the –"*
> "Yes, but I will survive. I have survived since the beginning. I've survived fires and floods and eons of ice. A billion years goes by pretty quickly for me. No, I'm not in danger."
> *"But if* you're *not in danger, who is?"*
> "You are, Mervin. All life is in danger. Remember, life began as a gift, and it must always be treated as such. No matter how unstoppable the danger seems, no matter how unavoidable, there's always something you can do." *(pp 433–5)*

Like the entities of Mervin's time, we too have refused to hear the voice of the Old One. And like Mervin, we need to engage in this conversation even as we are facing the accelerating climate emergency. Like for Mervin, so too for us the only way forward is through building communities – for there is always something we can do to honour the gift of life on a habitable planet. This is the agency and community that we are reminded of through the gifts of fiction.

Looking ahead, we will need to find creative ways to leverage stories as tools for the societal transformation toward an ecological civilization. In the US the current administration has already pushed the country – "back again" – into climate denial, dismantling of environmental regulations and reversing climate action. This time round, the effort is more comprehensive. It includes blocking any environmental and climate justice projects as well as strategic lawsuits against public participation – like oil giant's Energy Transfer against Greenpeace – to stifle dissent and protests. The recently announced US$660 million punitive damages Greenpeace allegedly owes the oil giant for "defamation, trespass, and civil conspiracy" is a form of intimidation that may well become the norm (Greenberg, 2025). Once denial and intimidation become policy principles, the US would effectively become a hostage of a story that can only accelerate the collapse in a very Birnam Wood fashion.

As the beast slouches toward Bethlehem, our challenge is to come up with stories that offer an alternative to the revanchist anthropocentric myopia

ascendant today. Personally, I find strength in two commitments. First, although it may be tempting to believe otherwise, Americans who care about climate, nature, trees, wildlife and oceans do not belong in one political camp only. Yale studies, for example, show that over 72 per cent of Americans believe that climate change is real, over 70 per cent believe it will harm future generations and over 58 per cent believe it is already harming people in the US today (Marlon *et al.*, 2024). These sentiments are dominant outside of the US as well, with 72 per cent of people across eighteen of the G20 countries supporting "making it a criminal offence for government or leaders of large businesses to approve or permit actions which cause serious damage to nature and climate" (Earth4All, 2024). These opinions increasingly transcend political and generational divides. They are effectively a shared space for acting together – and I hope we will.

Second, as Rebecca Solnit argues, if we fight for what we love, we don't get to give up only because a political outcome is different from what we expected. Instead, we mobilize differently, recognizing that past strategies have failed. This mobilization is not about finding hope. Rather, as Solnit (2024) puts it, it is

> *about being resolute and lining up resources, the way people generations ago laid up supplies for winter. Just like the fossil fuel industry loves doomers who give up on defeating it, so authoritarians love fear, surrender, people who've decided they're already defeated, who are already afraid to resist. Do not give them what they want.*

The future is yet unwritten. We all have a role to play in how it unfolds.

References

Catton E (2023) *Birnam Wood*. Farrar, Strauss and Giroux, New York, NY, USA.

Earth4All (2024) Causing environmental damage should be a criminal offence, say 72% of people in G20 countries surveyed. *Earth 4All*, 6 September. Available at https://is.gd/fUrHyV (accessed April 2025).

Greenberg C (2025) Greenpeace vs. Energy Transfer's SLAPP: What happens after the North Dakota trial? *Greenpeace*. Available at https://is.gd/1jzEc9 (accessed April 2025).

Jeffers O (2023a) *Begin Again: How we got here and where we might be going – Our human story. So far*. HarperCollins, London, UK.

Jeffers O (2023b) Begin Again. *YouTube*, 19 September. Available at https://is.gd/fcwunh (accessed April 2025).

Mann M (2024) Foreword. In: Webb A, Beach R and Share J, eds. *Empowering Youth to Confront the Climate Crisis in English Language Arts*. Teachers College Press, New York, NY, USA: ix–x.

Marlon J, Goddard E, Howe P *et al.* (2024). Yale Climate Opinion Maps. Available at https://is.gd/ie1sIW (accessed April 2025).

Selznick B (2023) *Big Tree*. Scholastic, New York, NY, USA. 2023.

Solnit R (2024) Authoritarians like Trump love fear, defeatism, surrender. Do not give them what they want. *The Guardian*, 9 November. Available at https://is.gd/FLHNo8 (accessed April 2025).

Zimmerman L (2022) Our climate discourse is gradually normalizing an atrocity. *Current Affairs*, 7 February. Available at https://is.gd/dAALB3 (accessed April 2025).

A Future Canopy (series)

Brydee Rood

Living sculpture (Whanganui, New Zealand; 2021).

From the artist: "A Future Canopy consists of six species of native trees – Tōtara, Kōwhai, Pūriri, Rata, Rewarewa and Miro – spread across the two green islands of the Burton Avenue to provide a continual food source of flowers, nectar and fruit for native fauna including pollinators. The habitat created will serve the local birdlife and residents over generations to come. The inherent physicality and plant lore of the chosen trees creates a living composition that will enrich local ecology in the suburban landscape."

Higher-quality versions of artwork from this issue: https://www.ecologicalcitizen.net/artworks.php?v=8&n=2


Rati


Puriri


A future Canopy
Miro


Tōtara
tōtara

How solarpunk can help us rewild our lives

Ana Sun and Susan Kaye Quinn

Ana is a technologist and writer whose short fiction has been shortlisted for the inaugural Utopia Award, longlisted for a British Science Fiction Association Award and selected for the Best of British Science Fiction. Susan is an environmental engineer and writer, whose short fiction has been published in *Grist*, *Solarpunk Magazine* and *Reckoning*. She is also the host of the *Bright Green Futures* podcast.

This paper discusses the mindset shift that the genre of solarpunk embraces: that nature is talking and, if we want to live sustainably on the planet, we need to learn to listen. Solarpunk stories help us see our relation to nature differently – as porous beings, hosts and beneficiaries of entire microscopic communities, intimately intertwined with our environment. Solarpunk stories can help us to decentre ourselves, shift our perspectives and re-imagine what it means to relinquish control and reconnect with nature.

Keywords: ecological empathy; societal change; sustainability; values
Citation: Sun A and Quinn SK (2025) How solarpunk can help us rewild our lives. *The Ecological Citizen* **8**(2): 186–92.

Stories are how we interrogate what it means to be human: every narrative form, both realistic and fantastical, reflects and shapes human culture. But embedded in those stories are ideas, many of which are destructive, about our relationship with nature. The climate emergency and the overlapping ecological crises we face have forced us to reckon with a new reality: that relationship is fundamentally broken. Solarpunk, a relatively new genre that envisions sustainable futures (Sun, 2022), offers an opportunity to reimagine that relationship. While the term *solar* is used to stand in for ecological sustainability and appropriate technology more broadly, and *punk* because it rejects our ecologically destructive status quo, the literature and the movement are being co-created by all who engage with it (Quinn, 2023).

Our status quo stories have a long history of claiming we have a right to lord over nature – to tame and claim it. Our history is also deeply entwined with growing plants in a human-controlled environment. From the beginning of settled agriculture, we cultivated plants for food, medicine, science and education, while elites displayed their wealth with ornamental gardens. In tandem, our stories, philosophies and religions reinforced the idea that nature existed for human benefit and exploitation. This is in stark contrast to some

Indigenous cultures – though not all (Rapp, 2024) – for whom the natural world is considered sacred, to be revered.

As science has advanced, it has become apparent how our view of our place in nature has been skewed by these stories of domination. Science is only now beginning to pose questions that interrogate how wrong we might have been about the fundamentals. For example, in the opening chapters of *The Omnivore's Dilemma*, Michael Pollan writes that:

> *Corn is the hero of its own story, and though we humans played a crucial supporting role in its rise to world domination, it would be wrong to suggest we have been calling the shots, or acting always in our own best interests. Indeed, there is every reason to believe that corn has succeeded in domesticating us. (Pollan, 2007)*

Pollan goes on to say that this notion could potentially be applied to *all* agriculture – that perhaps the agents in this historical process were the animals and plants which evolved traits we desired, so that we helped to ensure their survival and dominance amongst other species in the wild.

This shift in mindset is not an easy one to make; it can be difficult and challenging to our self-conception to grapple with the idea that we humans are not as in control as we thought.

We are porous colonies of beings

Science increasingly shows we are not as separate from the rest of the biosphere as we might believe. 'You are what you eat' takes on new meaning in studies showing that the food we consume feeds (or inhibits) the complex colonies of microorganisms in our gut biome; the gut–brain connection to this colony-of-the-smalls affects everything from our mood, to our immune and autonomic systems (Gwak and Chang, 2021). At every level, from cellular to systemic, our bodies are a co-evolved collection of captured microbes in conversation with the larger world around us.

And we aren't the only ones. For example, in *The Light Eaters* (Schlanger, 2024) – a fascinating front-line report from a strident new war among botanists about plant intelligence – Zoë Schlanger reveals to the plant-blind public a world of drama. Scientists are investigating ways that plants can sense light and sound, and adapt their behaviour to suit. Studies also show plants possess the abilities to recognize kin and manufacture chemical weapons for enemies, whether intruding pests or other plants competing for resources. And works like *Finding the Mother Tree* (Simard, 2021) illuminate nearly invisible mycelial networks that support virtually all life, grounding our intuited sense of interconnectedness in scientific fact.

Nature is – like our gut biome, like a forest – a collection of beings, large and small, in constant conversation with one another: sometimes attacking or defending, sometimes in elaborate symbiosis, but always reacting and responding, vibrantly *alive* in ways we humans routinely dismiss or ignore – unless it serves or impedes us. Our every breath is dependent on this elaborate

dance of life; the water that runs through our rivers also runs through our veins. The appearance of separateness quickly dissolves upon close (or really any) inspection. We must thus turn to new analogies and understandings to expand the rhetorical repertoire of a better relationship with the natural world.

Our neoliberal, capitalist order dictates that the natural world is ours to conquer and exploit. The reality we live in is much more entangled and inseparable. Building a sustainable world will rely on understanding this deeper reality and renegotiating our relationship with nature. Plant enthusiasts like Schlanger and scientists like Simard already understand this. But how do we make that mindset shift for ourselves? What does a new *way of seeing* nature look like?

This is where solarpunk stories offer a whole constellation of blueprints.

Solarpunk sees nature differently

Solarpunk is not unique in championing sustainability, but as a literary, artistic and philosophical movement, it has come to oppose late-stage capitalism and unregulated economic growth, and embrace a range of ideas including shared commons, social justice movements, renewable energy sources and Indigenous wisdom. Its strength lies within its steadfastness in crafting positive narratives; within its courage to think and imagine beyond grief, despair and fear.

Capitalism is increasingly buckling under the weight of abusive technologies and widening wealth inequality. Every year, the climate crisis deals more body blows via billion-dollar disasters, and the models we have for everything from weather patterns to supply chains to insurance markets are showing cracks. Risks from climate change have not been priced in, revealing the fragility of economies built on 'moving fast and breaking things'. Optimistic promises of technology liberating us all – with robots, blockchains and AI delivering a fully automated tech-saturated utopia – have darkened into a reality of AI being responsible for decisions that endanger real lives while contaminating the infosphere, as well as the biosphere.

Solarpunk adopts an alternative: *move purposefully and fix things*. This manifests in re-use culture (thrifting, Buy Nothing groups, Repair Cafés), reducing consumption, Right to Repair and a rejection of the fossil fuel industry's lies about recycling. This DIY and Fix-It culture extends to rewilding backyard habitats, supporting pollinators and bird migration, and rectifying the prevalence of invasive species that we have spread across the world as a result of colonization and globalization. In looking to Indigenous cultures, solarpunk recognizes that humans have always been gardeners. Even the Amazonian rainforest, which in popular culture (and reality) represents nature at its most wildly diverse, has actually been human-influenced (Crooks, 2021). In Australia, the Aboriginal practice of cool burning is a way to reduce risks of hot fires, but also to alter biodiversity. But these human influences are based upon regenerating our environment, rather than exploiting and extracting from it – ideas that are deeply embedded in the mythos of empire-building and colonization (Wagner, 2024).

A solarpunk approach reaches for ideas that embrace a symbiosis with nature that includes everything from rewilding the lawn to protecting old-growth forests. Some Indigenous cultures have long offered an alternative viewpoint that considers humans as nature's 'younger sibling', newly arrived. Wildly popular works like *Braiding Sweetgrass* (Kimmerer, 2015) embrace the perspective that plants and animals are our oldest teachers. Some modern pagan and witchcraft traditions offer a different yet still spirituality-based relationship with the earth, one where all beings – and the climate crisis itself – exist both in the mundane world and on a spiritual level with the two intimately connected, providing a lens for seeing how we are not separate from nature but part of it.

But as hope-affirming as real-life solarpunk experiences can be, they are limited to what we can do right now; solarpunk *stories* help us to map and interrogate aspirational blueprints for tomorrow. Some darker solarpunk (or perhaps eco-punk) stories show a green apocalypse, where human society has collapsed and nature has reclaimed the towers of cities, rewilded the farms and taken over where humanity has retreated. The pandemic famously (if perhaps apocryphally) gave us a glimpse of nature moving into human spaces for the brief moment we had retreated to our built environments (Ishak, 2020). Even more dramatically, thirty years after humanity abandoned the Chernobyl Exclusion Zone, animal populations from beavers to wolves are thriving (Wendle, 2016). But retreat is not a viable solution any more than tech-optimist utopias purport to be.

There are a number of ways solarpunk stories help us see nature differently. Solarpunk generally eschews tech solutions or apocalyptic ones: it chooses an appropriate technology that is based on sustainability. It looks to nature for models to mimic, borrowing from millions of years of ecosystem co-evolution for ideas about how to live in harmony with each other and the biosphere. Stories may tap into real-life eco-witchcraft and extend it into fantasy, or they might imagine new creatures and ways of communicating with the non-human. Solarpunk stories borrow from nature, personify nature, sometimes integrate nature into our buildings, our inventions, and even our bodies. They propose new social and economic models, new ways of living in community or constructing family. They trial-run policies and technologies that haven't been invented yet, flushing out problems and conflicts, and constructing pathways to sustainable futures that can seem impossibly far away. Sometimes the narrative devices are fanciful rather than hard science, but like any mythos, their job is not to actually invent a fusion reactor but to set our imaginations on fire, shifting mindsets and unlocking possibilities.

Stories help do the imaginative work that has to precede inventions and revolutions. Both stories and real-life solarpunk culture harness human capacities to imagine and then build – or grow. The interplay between solarpunk fiction and reality, between philosophies and practical applications, between science and art, can only broaden our hearts and minds; all are necessary. In pushing our imaginative boundaries, solarpunk stories can help us decentre ourselves, shift our perspectives, and re-imagine what it means to relinquish control and reconnect with nature.

Learning to listen to nature again

Stories can prepare us to shift toward a sustainable world, but to truly listen to nature, it can help to find techniques that open up our perspective. These techniques can be rooted in a narrative or belief system that conceptualizes nature's personhood, or simply be practices that ground us and connect us to nature.

In Indigenous cultures that foster a respectful relationship with nature, their cultural practices of engaging with the environment reflect, build and sustain that belief system. As a participant in a recent study on sharing Indigenous values and practices remarks:

> *The best way to explain this is [...] the environment actually teaches us what we're supposed to do to keep it intact. The animals teach us how to interact with them, to keep them intact, and us intact. The environment tells us these things, and we develop our language around that. (In Menzies et al., 2024)*

The study of these kinds of Indigenous values can shift perspectives and give insights on how to apply these values more widely for more sustainable living.

Within some modern animist and pagan belief systems, and some earth-based witchcraft traditions, there are distinct practices to connect with nature. 'Green witchcraft' is a new name for an old practice that incorporates herbology, natural remedies and earthly energies, and has its roots in animist practices, often with principles of reciprocity. For example, if you use a part of a tree, you would also give the tree an offering in return, because the tree is or has a spirit. These belief systems provide both a mental framework and an embodied practice of connection for their practitioners.

Science gives us another access point to shift our understanding of our relationship with nature – one which doesn't require a spiritual connection or belief system. Emerging evidence shows non-human beings, including plants, to be more conscious, animated and purposeful than is commonly understood. Mindfulness, gardening and immersion in green spaces are embodied practices that – with increasing scientific validation – not only reconnect us to nature but have known health benefits. Nearly anyone who walks into a forest can viscerally feel the impact when immersed in the natural world, a human response that is also measurable by science.

Whichever way we choose to open our minds so we can perceive ourselves *as part of* nature rather than *in opposition to* it, rituals and practices exist to facilitate this – actions that re-establish a connection between us and the natural world. These techniques not only add to our knowledge of the biosphere, but simultaneously transform our stories about ourselves.

One such technique is to break the spell of plant blindness; to depart from seeing nature as an anonymous sea of green and to distinguish individual plants in all their context. From an Indigenous perspective, this might mean connecting with Elders to access knowledge about that plant's lore or use as medicine or place in the natural world. For pagans or earth-based witchcraft practitioners, this could mean learning the spiritual or medicinal properties of

a plant, foraging for it, using it in rituals or simply observing its changes through the solstice cycles. From the standpoint of scientific observation, it could be learning to recognize every stage of a plant's growth, including where and how it prefers to grow. An expert forager familiar with the Sussex woodland might tell you that this technique would enable you to distinguish between wild carrot, celery and hemlock. These look almost the same, but one can kill you.

Once you learn what a yarrow plant looks like as a seed, as a plant shoot and in its mature flowering form, you will always be able to recognize this plant with fern-like leaves and distinctive scent, whether it nestles in a field of clover and daisies, or stands at full-height among a cluster of wildflowers. You might remember its medicinal or magical properties, how it is reliant on the pollinators who fertilize it, or how it provides for the starlings who line their nest with it to keep parasites at bay, and the many moth species who rely on it to feed their larvae. Yarrow would cease to be invisible, whether in a forest or tucked in the grassy strip by a roadside; it would become an *individual* that has its own lifecycle, its own preferences, taking its own place in the ecosystem. It is now an essential link, both individual and connected.

By whichever technique we choose to employ, losing our human-centric plant blindness will enable us to place ourselves inside of a larger, complex system. Learning to listen to nature means understanding we are part of the same story as the natural world around us – not separate from it.

Taking action as part of nature

The wild world is in constant communication with itself, through every sense: sight, touch, sound, chemical and physical processes, consuming and being consumed, reproducing, living and breathing. What would it look like for humans to enter the conversation, rather than to dominate it or to shut it out?

For us as individuals, these connections can be made visible through activities as simple as rewilding a section of your yard, joining a local farm share to connect better to the source of your food, composting to understand the cycle of organic material or simply spending time in nature. Hiking, kayaking, tending a community garden or building your own – anything that reconnects you with the land, water or air will illuminate how you are not separate from the living world but part of it. Equipped with understanding that we are part of nature – and feeling the embodied experience of that connection – the next steps become obvious and important: protection, balance, restoration and rewilding of the natural world.

We can also use the levers of capitalism. Activists are working to sway insurance companies away from fossil fuel projects (Hughes, 2024), and an increasing number of nations have begun to use legal instruments to legislate rights to rivers, wetlands, forests and other ecologies (Challe, 2021). By applying the concept and language of 'human rights' to our environment, we have begun a systemic approach to decentring ourselves.

If we are nature and nature is us, it only makes sense to stop poisoning the Earth with pollution, and to refrain from heating the planet through burning

fossil fuels, biomass and trash for energy. In order to save ourselves, we have to respect the biosphere we rely upon for life.

We, too, are individuals who each have our own life cycles, our own preferences, our own place in the ecosystem, one inextricably linked to the microplastics in our water, the plants and animals we grow for food, the toxic waste we create for our inventions, the endless amount of energy we consume. No other species is as invasive and destructive as humans have been.

But it does not have to be that way. As solarpunk shows us, the stories we tell can point the way.

If we want to live sustainably on the earth, the first step is to realize there is no alternative; this planet is our home, one that we share with countless other species. The second is to listen to our elder siblings, the plants and creatures who are already in constant conversation as they grow, thrive and survive.

Humanity needs to finally enter the chat.

References

Challe T (2021) the rights of nature – can an ecosystem bear legal rights? Columbia Climate School, Columbia University, NY, USA. Available at https://is.gd/RkaTeb (accessed May 2025).

Crooks V (2021) In a remote Amazon region, study shows indigenous peoples have practiced forest conservation for millennia. *Smithsonian Magazine*, 23 June. Available at https://is.gd/B2BGgc (accessed Feb 2025).

Gwak M and Chang S (2021) Gut–brain connection: Microbiome, gut barrier, and environmental sensors. *Immune Network* 21: e20.

Hughes R (2024) 'The Achilles heel of the fossil fuel industry': Why climate activists are targeting insurance firms. *Euronews*, 23 February. Available at https://is.gd/1uyTN9 (accessed May 2025).

Ishak N (2020) 33 pictures of animals taking over human spaces during COVID-19. Available at https://allthatsinteresting.com/covid-19-animals-reclaiming-earth#8 (accessed May 2025).

Kimmerer R (2015) *Braiding Sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants*. Milkweed Editions, Minneapolis, MN, USA.

Menzies A, Bowles E, McGregor D *et al.* (2024) Sharing Indigenous values, practices and priorities as guidance for transforming human–environment relationships. *People and Nature* **6**: 2109–25.

Pollan M (2007) *The Omnivore's Dilemma: A natural history of four meals*. Penguin, New York, NY, USA.

Quinn S (2023) Rewriting the future. *Dreamforge*. Available at https://is.gd/XCSroM (accessed May 2025).

Rapp, T (2024) The myth of the noble savage. *Noēma*, 9 July. Available at https://is.gd/Bz6KXm (accessed May 2025).

Schlanger Z (2024) *The Light Eaters: How the unseen world of plant intelligence offers a new understanding of life on Earth*. Harper Collins, New York, NY, USA.

Simard S (2021) *Finding the Mother Tree: Discovering the wisdom of the forest*. Penguin Random House, New York, NY, USA.

Sun A (2022) Write the future you want to live in. *Dreamforge*. Available at https://is.gd/A9x1Cw (accessed May 2025).

Wagner P (2024) The solarpunk garden: Moving beyond Eden. *Speculative Insight*, 3 August. Available at https://www.speculativeinsight.com/essays/the-solarpunk-garden (accessed May 2025).

Wendle J (2016) Animals rule Chernobyl three decades after nuclear disaster. *National Geographic*, 19 April. Available at https://is.gd/oescRp (accessed May 2025).

The things that tether us to Earth: A review of Byung-Chul Han's *Non-things*

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Keywords: ecological living; societal change; values; worldviews
Citation: Hood T (2025) The things that tether us to Earth: A review of Byung-Chul Han's *Non-things*. *The Ecological Citizen* **8**(2): 193–6.

A review of: Byung-Chul Han (2022) *Non-things: Upheaval in the lifeworld*. Polity Press, Cambridge, UK.

"Who suspects that things have lives of their own? Who feels threatened or enchanted by things?" asks Byung-Chul Han in *Non-things* (p. 52). Although this book is not framed from an ecocentric perspective, I will argue that its emphasis on embodied connections and tangible experiences significantly enriches the conversation surrounding ecocentric living.[1]

Like Han's other works (such as *The Burnout Society* [2015] and *Capitalism and the Death Drive* [2021]), *Non-things* challenges neoliberalism and late-stage capitalism, but it stands apart by channelling this critique through the philosophical concepts of thing and non-thing. According to the author, Earth "consists of things that take on a permanent form and provide a stable environment for dwelling", yet our transition to the ethereal infosphere "*de-reifies* the world by *informatizing* it" (p. 1; all emphasis in the original). Drawing on Heidegger, Han argues that our detachment arises when we forsake our ontological status as a striving animal who "gains access to the environment by way of the hand" in favour of exchanging information with digital "*informatons*" designed to minimize resistance in our daily experience (p. 3). Our devices, along with our obsession with data, seemingly render existence accessible and controllable to us, erasing life's mystery and unpredictability. In this way, our concern for the future is fading because we can no longer create coherent stories or find meaning in our place on Earth.

Han's assessment places us squarely within the disenchanted domain of the Megamachine and its domination through capital, the state, and technoscience, which diminishes enchantment in the name of progress (see Curry [2019]). In digital societies, he argues, the smartphone, selfie and AI are instruments of this system since the choosing finger (*digitus*) replaces the acting hand, granting the illusion of autonomy yet binding us further to the infosphere. The smartphone, the author's *bête noire*, exemplifies this duality precisely because it "*places* the world" at our fingertips while eroding community as we busy ourselves online (p. 21). Relatedly, selfies illustrate a shift whereby selfhood becomes externalized and commodified, eliminating privacy and blinding us to others. And now, with artificial intelligence, powered by big data, our thought patterns risk becoming further untethered from reality as we kowtow to algorithmic processes. By stifling attentiveness and creativity, artificial intelligence does not allow us to "move, beyond what is given, to *untrodden paths*" or envision "a *new world*" (p. 43). Surrendering our human capacities to the technologies meant to enhance them, we edge closer to a future where our tools determine not just how we live, but who we are.

Just as nature-flattening infrastructure, blinding lights and grating noise disrupt the lifeways of most wildlife taxa, we humans are also losing our sense of orientation in societies driven by totalizing consumption and communication. Even when we unplug from social media and the latest apps, we face a physical reality that increasingly resembles the infosphere's monotonous flattening of existence. We are losing the passion to envision a healed world because it is no longer at the forefront of our minds. In architecture, for example, the desire for machine-like efficiency akin to our smooth digital devices has given us rows of unadorned buildings indifferent to beauty, especially that inspired by natural forms. This matters because, according to Han, "[t]he decorative and the ornamental are characteristic of things. They are life's way of telling us that life is about more than mere functioning" (p. 23). Meanwhile, the only messages we are given to dwell upon are those contained in gaudy advertisements, which "block out things, pollute them. Junk information and communication destroy the silent landscape, the discreet language of things" (p. 80). No wonder many feel disconnected from Earth, our only home.

The major section of the book, entitled "Views of Things", explores our changing perception of reality. Han laments that the material world has lost its defiant character: "We are no longer maltreated by things" (p. 46). This state was once better depicted in media, like Chapman films or the contrast between modern Mickey Mouse and the protean environment he struggled against in the old cartoons. Today, we see only the obedient surface of things, though they possess hidden lives and agendas, as in old stories such as Addison's "The Adventures of a Shilling" (1710). Han contends that processes of modernity replace things' inner warmth and integrity with a "[m]echanical coldness" (p. 51) that keeps us from encountering "an independent *counterpart*, *mutuality*, a *Thou*" (p. 53). He effectively highlights this disconnect by contrasting Odradek, the mysterious spool of thread from Kafka's "The Cares of a Family Man" (1919),

with Amazon's Alexa, a device embodying our ghostly age of "*gapless*, digital communication [that] destroys both nearness and distance" and thus genuine relationality (p. 55). Reconnecting with the world, this book tells us, means avoiding instrumentalism and objectification.

In Han's analysis, things and the spheres in which they exist, quite separate from our own when they wish to be, are enriching, but they can also be perilous. I suggest that his thinking aligns well with the original significance of *faërie*, defined as "the mythworld itself, which is everything outside of our control. Faërie is an old name for the world of nonhumans that surrounds, feeds and (sometimes) tolerates us all" (Bringhurst, 1995: 16). In modernity, humans rarely encounter *faërie* because the more-than-human world – a realm with which *faërie* is cognate – has been marginalized. Weberian processes of domination and rationalization have not only destroyed wilderness areas but also diminished the quality of wildness. Enchantment, being a relational, immanent and uncontrollable moment of wonder, shares an affinity with wildness, as both are rooted in the autonomous natural world (Curry, 2021). Yet, while the planet remains fundamentally unmasterable and always capable of offering enchantment, most of us fail to recognize this state. We move swiftly and safely along, unchallenged but also untouched by nonhuman others.

As the manifold consequences of ecocide can attest to, human dominion comes at the cost of depriving ourselves of life's gifts. To reclaim these blessings, Han urges us to be present, but we seldom permit ourselves to do so because "*presence* requires *exposure, vulnerability*" (p. 57). It has never been more important to adopt a lifestyle centred around care, listening, rituals and repetition, creating stability and meaning over time. The author upholds *The Little Prince* (1943) as an exemplar of this way of being. In Saint-Exupéry's cherished narrative, actions such as tending to a rose or visiting a friend speak to the important bonds that make others unique and irreplaceable.

Han argues that our subservience to the infosphere and our desire for complete control may break these vital bonds. He worries that "*humans will abolish themselves in order to posit themselves as the absolute*", since we have too strong an innate tendency to "soar up towards the un-thinged, the unconditioned" (p. 72). Later, in seemingly contradictory remarks, he objects to a world in which we have "abolished all transcendence, all vertical order, that demands stillness. The vertical gives way to the horizontal. Nothing *rises*. Nothing *becomes deeper*" (p. 78). In this context, however, the author is addressing the loss of stillness in society due to our distraction with sprawling data streams. Crucially, in our most contemplative and wondrous moments, especially when dwelling upon nature, we are not dealing with world-denying transcendence, whether this is felt as a rising or a deepening. This is the case because such experiences can only ever remain fixed on Earth, originating from lateral (horizontal) connections – relationships and the differences that facilitate them.

The exploration of relationality and the other in *Non-things* is compelling, but it leaves important connections unexplored. For instance, the philosophy

of things has significant parallels to contemporary animism, which sees the world as potentially comprised of persons (Harvey, 2013). Additionally, the discourse on enchantment – by presenting the issue in more concrete, ecological terms – further elucidates Han's concern that modernity has rejected an awareness of the living Earth. The author does not engage deeply with these ideas or with ecological discourse more broadly. Indeed, his book is only weakly involved with environmental concerns, and foundational issues like anthropocentrism's denial of animality (Challenger, 2021) are entirely absent. However, Han does provide some tantalizing conclusions, suggesting that "sustainability alone will not be enough" to heal the Earth and that "ecology must be preceded by a new ontology of matter, one that views it as something that lives" (p. 96).[2] These statements are welcome, though they may leave informed readers wanting more.

Ultimately, while Han's book exhibits limited engagement with green studies generally, this is also a strength. By steering clear of conventional academic frameworks, it avoids common but unproductive perspectives and attitudes, such as prioritizing human social justice or endorsing anti-nature theory. Instead, in its eclectic and humane fashion, this work focuses on what truly matters: relationships, presence and wildness.

Reading *Non-things* reminds us of the dangers of severing ties to things since they give our lives meaning. The book points the way forward by suggesting that we must return to positive physical participation on Earth, surrounding ourselves and interacting with things while respecting their separateness. To go through life tethered to things, grounded by the history and memory they establish, is to walk *with* the Earth, rather than trampling over it or seeking to transcend it altogether.

Notes

1 For a more detailed examination of Han's book, see Hood (2023).

2 Han argues that a "re-romanticization of the world would presuppose its re-materialization" (p. 96), invoking Bennett (2010) in support. For a nuanced exploration of how forced re-romanticization can undermine enchantment, as well as Bennett's technophilia and instrumentalization of the experience, see Curry (2021).

References

Bennett J (2010) *Vibrant Matter: A political ecology of things*. Duke University Press, Durham, NC, USA.

Bringhurst R (1995) Introduction. In: Kane A, ed. *The Dreamer Awakes*. Broadview Press, Peterborough, CA, USA: 11–18.

Challenger M (2021) *How to be Animal: A new history of what it means to be human*. Canongate Books, Edinburgh, UK.

Curry P (2019) *Enchantment: Wonder in modern life*. Floris Books, Edinburgh, UK.

Curry P (2021) The experience of enchantment and the sense of wonder. *Green Letters* **25**: 115–29.

Harvey G, ed. (2013) *The Handbook of Contemporary Animism*. Routledge, Edinburgh, UK.

Hood T (2023) *Non-things: Upheaval in the lifeworld* – Book review. YouTube. Available at https://www.youtube.com/watch?v=wFzz37OppuI (accessed February 2025).

Extending justice considerations to insects, crustaceans, cephalopods and other invertebrates

Joe Gray

Joe is a field naturalist who lives in Great Britain. He has edited or co-edited several books, the most recent being *Cohabiting Earth: Seeking a Bright Future for All Life* (SUNY Press, 2024).

Keywords: animal ethics; intrinsic value; societal change; values
Citation: Gray J (2025) Extending justice considerations to insects, crustaceans, cephalopods and other invertebrates. *The Ecological Citizen* 8(2): 197–9.

A review of: Russil Durrant (2024) *Invertebrate Justice* (Palgrave Studies in Green Criminology). Springer Nature, Cham, Switzerland.

Russil Durrant's *Invertebrate Justice* belongs to a series of scholarly titles on green criminology, the overall focus for which is "the development of and enforcement of environmental laws, environmental criminality, policy relating to environmental harms and harms committed against non-human animals" (see https://link.springer.com/series/14622). Given this juridical scope, in which the non-human concerns examined might easily have been restricted to harms against species with existing legislative protection (*e.g.* major targets for wildlife trafficking) and more broadly ecocidal activities (*e.g.* dumping of toxic materials into lakes), it may come as a pleasant surprise to find a title in the series that suggests a foregrounding of invertebrate-wide interests. This, after all, is a group of organisms on which humans bestow comparatively few legal safeguards.

It soon becomes clear, however, that Durrant's focus is principally on those invertebrates who exhibit sentience – a subset of organisms that, based on current understanding, includes: "octopuses and other coleoid cephalopods, decapod crustaceans [*e.g.* crabs], and many insect species" (p. 119). Indeed, the author's position in the monograph is that "although sentient species (including humans), non-sentient species, and 'ecological collectives' (e.g., ecosystems) all have intrinsic value and hence some moral status, we only have strong direct justice obligations towards sentient species" (pp. 7–8). This sentientist challenge to anthropocentrism falls substantially short of an ecocentric philosophy, in which the possession of agency and interests qualifies a living being for justice considerations independently of any established capacity for subjectively experiencing the world (Curry, 2017; Washington *et al.*, 2018). In practical terms,

such a distinction is especially significant for groups of organisms, such as invertebrates, in which the extent and nature of sentience is poorly understood.

Nevertheless, Durrant's treatise should serve, even to the most devoted ecocentrist, as a welcome argument for extending the bounds of criminology. Green criminology, the author explains, has drawn on an area of social study known as zemiology to recognize the importance of both illegal and non-illegal harms and then expanded its horizon further with the assertion that "victims of harm can include humans, non-human animals, and the wider environment" (p. 149). The invertebrate justice model that Durrant advances within this purview is built on the eco-justice framework of White (2013). In this structure, justice concerns are organized into those that encompass present and future humans (*environmental justice*), those concerning non-human species (*species justice*), and those relating to ecological collectives (*ecological justice*).

Durrant notes that in cases such as the reduction of pesticide use, the direct benefits from a *species justice* perspective in reducing harms to invertebrates will translate into indirect benefits for other species, as well as positives from both an *environmental* and an *ecological justice* perspective. Conversely, there are examples, including where invertebrates are vectors of human diseases, in which antagonism will arise between the different domains. Nonetheless, through a better comprehension and appreciation of our ecological relationship with invertebrates, we might begin to see, at a societal level, how synergies far outweigh any conflicts.

Durrant's invertebrate justice model is well presented and is supported by strong argumentation. Furthermore, the author is a passionate advocate for the importance of his subject – observing, for instance, the following (p. 4):

> *Given that humans inflict significant harm on a very, very large number of invertebrate species, the topic of invertebrate justice may not simply be of peripheral concern for scholars and policymakers but, in fact, may be the most pressing moral issue of our time!*

The more holistic lens of ecocentrism – in which sentience is one pillar among several for non-human justice – only magnifies the importance of Durrant's speculation. Furthermore, the author might have noted here, as he does elsewhere in the book, that it is not just the number of species that is huge but the quantity of directly affected individuals (a figure that quite possibly extends, on an annual basis, into the quadrillions [p. 16]). The significance of this is apparent, to give an example, in the urgent need for empirically informed ethical analysis of the rapidly growing industry of insect farming – a point that has been made by Helen Lambert, who is a former sentience advisor at World Animal Protection (discussed in Gray [2022]). Of course, there is little point in such scrutiny if minimal or no transformation results from the identification of problems. And so it is to the topic of change, at the level of the individual and the system, that Durrant turns in his final chapter.

While acknowledging that "the road to invertebrate justice is long and difficult" (p. 361), the author argues that there is a potential for human societies,

through continued incremental modifications, to "reduce an enormous amount of unnecessary harm, suffering, and death" (p. 362). Whether one's view of the world is guided by sentientism or ecocentrism, there is a deeply significant truth in that statement.

References

Curry P (2017) *Ecological Ethics: An introduction* (revised second edition). Polity Press, Cambridge, UK.

Gray J (2022) Sentience in invertebrates: A report on a two-part webinar. *The Ecological Citizen* **5**(2): 201–9.

Washington H, Chapron G, Kopnina H *et al.* (2018) Foregrounding ecojustice in conservation. *Biological Conservation* **228**(C): 367–74.

White R (2013) *Environmental Harm: An eco-justice perspective*. Policy Press, Bristol, UK.

Clockwise from top: a giant horntail, a red net-winged beetle and numerous parent bug nymphs, all in Scotland (Joe Gray)

Poetry section

Edited by Victor Postnikov

Victor is a poet, essayist and translator whose home is in Kyiv, Ukraine.

Life far exceeds humans. For millennia, ecopoets have understood it as a far greater enterprise. In their poetry, we can hear the voices of those who came before us and those who live alongside us. Now, however, they face extinction and die in silence, deafened by the roar of civilization. The time has come to renew the old understanding that all life, including humanity, speaks a common language. Thus, the mission of ecocentric poetry, or ecopoetry, is to help us empathize with non-human entities, be they a whale, a tree or a mountain. For we are all kin. Through metaphor and imagery, it speaks directly to our hearts and genes. We begin to realize that we have evolved together and share a common fate.

CLASSIC

The Peace of Wild Things

Wendell Berry

When despair for the world grows in me
and I wake in the night at the least sound
in fear of what my life and my children's lives may be,
I go and lie down where the wood drake
rests in his beauty on the water, and the great heron feeds.
I come into the peace of wild things
who do not tax their lives with forethought
of grief. I come into the presence of still water.
And I feel above me the day-blind stars
waiting with their light. For a time
I rest in the grace of the world, and am free.

From *The Peace of Wild Things And Other Poems* (Penguin, 2018)

CLASSIC

Bird Song in the Notebooks of Edward Thomas

On most days of his adult life, Thomas kept a record of his observations of the natural world in field notebooks. These especially featured birds, sometimes while travelling but often in and around the village of Steep in Hampshire, where he lived from 1906 till 1916. Below is a small selection.

6 May 1907
When turtle doves come it is summer – as if sleek words stretched themselves out in the sun & purred.

June 1907
There must be woods & lawns in brain, how else this joy of seeming to see the rain leavening my rain, the fair shapes of leaves etc, all seem like a pleasure of one's own, & thro one's inner woods flies the woodpecker & sings the nightingale.

10 September 1907
... a robin sings tremulously edging and lacing the morning's melancholy silence

26 September 1907
Owls shouting into the woods, echo of Ashford valley, pitch dark, wet after a day of rain, still after a hurricane, with the little undertone of the falling stream the only other sound & that being continuous coexists with rather than breaks the silence which it is the joy of the Owl to shatter, to honeycomb.

4pm 12 December 1907
Robins at fading light seem like my own thoughts, nervous, shadowy, quiet shadows in a shade they seem so near to me & less shy than ever, as I walk along the drenching road & see no other bird.

20 February 1908
After mild (bright & cloudy alternately) day with first chaffinches, missel thrushes, larks & thrushes out in the short autumn-sown corn, singing too – rain comes in just before nightfall, at 4.30 & in quiet dimness which the marketers curse the birds are happy & I hear the 1st blackbird & even the smell of a soaking manure heap under elms is good.

31 May 1908
Blackcaps sing with a few wildest clear dewy notes, brief & quick
Garden warblers w'out the wild notes but just quick liquid talk abruptly ending. Whitethroats the same but broken voiced, harsher, & with more animation & fun, as it sometimes rises into the air with its song fluttering carelessly

3 July 1908
Now the sparrows only are heard in the garden - except now & then a wood pigeon, a blackbird at the cherries, the cirl bunting on top of the fir, & at night the nightjar & very rarely the wren blurts out also chiffchaff, dabchick

21 September 1908
Curious passionate long sustained song of robin in an already almost bare lime, what does it mean?

3 October 1908
Misty moon with Ashford beeches just visible in golden rounds – dewy gossamer on yellow hazel – starlings on chimney castanet, whine, wail & pipe & mimic, just visible black in the white gilded haze

23 April 1909
Whitethroat tender & careless in thicket: blackcap sings high & passionate among sycamore bloom

10 May 1909
Song of goldcrest in garden like winding up a rather jerky irregular winch.

Hedgesparrows song

Characteristic for it to burst out suddenly once late in cold gusty drizzly day like a passing jest or pleasant memory coming to two friends who are sad before & after it. No other song but gusts in poplars & a few birds that have hatched chit-chitting other side of broad grass field.

3 July 1909
Lark's song

Sometimes spurting out a string of notes as fast as possible In a jet of liquid bubbles. Sometime hurrying as if it could only just keep pace with mere dancing speed, anon pausing on a note so sweet & languishing if almost fainting on it, but mostly it is a dance in which all thought of anything but speed & keeping it up seems lost.

3 July 1909
Chaffinches go thru firs clinking on their silver anvils as on spring

14 September 1909
A thrush in the garden sings clear & a few others, so that tho the 2 or 3 near are clear the rest are a remote medley but how unlike the Spring's – yet one could race across England this day & never be out of sound of thrushes ?descants? & this song suggests the thought of a beacon line of birds from the East up to my garden

18 February 1910
Linnets over windy hill are little grains of song scattered & gleaming as they scatter up & away

20 March 1910
Wagtail spotted (grey crossed out) wagtail runs along & across roofs singing quiet clear & happy like a lark in the sun.

4 November 1913
Thrush sings in anapaests & iambs & single long notes (at 10&11&12&13) chuckles & whispers & trills. Hunt meets by smithy.

12 April 1914 (Easter Day)
"The woodpecker has always something to laugh at" says Bronwen as she wakes.

19 April 1914
4 goldfinches arrive on one tree & presently twitter sweet like little green blades of song appearing cool out of earth, or flickering tongues of cool sweet fire when all hustle together.

28 August 1914
Clover hay being cut or lying. Rooks about so cheerful in warm sun, cawing from gleaning to gleaning or alighting in elms & pirouetting above them.

1 January 1915
Great tit whetting the saw as he goes along hedge in roaring wind & rain!

4 January 1915
Widgeon whistle the one clear sweet note going over low at 9 or so pm for about 5 minutes w[ith] intervals.

4 February 1915
Sometimes dozens of starlings separately on hedge & in oaks of meadow behind are talking at same time – the sweetest voiced democratic crowd imaginable

4 April 1915
One of the prettiest Spring things is the wagtail running up & down the warm tiles twittering as if the sun made the run as one's hand on a cat's back makes sparks.

May 1915
Nightingale express joy of light & grief of dark

CONTEMPORARY

Refuge

Sandra M Grayson

spirited dolphins
play in a sea sanctuary—
living without cues

CONTEMPORARY

Shallow Tank

Sandra M Grayson

"Do not tap the glass,"
the trainer warns from the stage
as three orcas swim pass.
"Do not tap the glass,"
she repeats as the marine park visitors harass
the orcas who glare at the spectators in silent rage.
"Do not tap the glass!"
the trainer warns from the stage.

CONTEMPORARY

Classic Poems

Danny P Barbare

Words fall like leaves.
Only evergreens become classics.
They're green under the snow of critics
That soon melts away.

Then, there stands the pine;
Its taste strong as always.
The sun shining on words in motion.
There is never a windless day.

CONTEMPORARY

Zoogeographically speaking

Ann Hart

Where ever you are, there are creatures. Among the
Xenias rustle ground squirrels, in the forests–
Wolves. Tiny Etruscan shrews drinking dew from
Violet-petal cups may be just below
Us, but do we open our eyes to see? Yesterday I
Touched a downy feather, lost by
Some small bird. Red – from a cardinal or
Robin, plucked to soften a nest or lost in a
Quarrel, either way, a treasure
Perfect in its quietness and symmetry. Our
Occupations hold our attention
Narrowly: jobs, hobbies, worries about
Money or health devour our minds, we

Lie awake at night, numbed hearts
Keening, oblivious to owls
Jostling in the musky pines and coyotes hunting
In the fields. Did you know coyotes in the east
Howl, in the west they purr? All see the moon
Glow, proclaim its glory. But we,
Filled with concerns, occupied with
Everyday chores and mental list making,
Die a little each night from lack of re-
Creation. Begin now, sing with the
Beasts, praise with the owls, chant the wolf's
Alleluia – raised to the rising moon.

CONTEMPORARY

Anthropocene

Pulkita Anand

"After such knowledge, what forgiveness?"
TS Eliot

A journey shouldn't begin by treading on others
Architectures of annihilation
From homo sapiens to homo rapines
Singularities of homo rapines space
From tabula rasa to raison d'être
I kill therefore, I am
From utopia to dystopia
God is dead, so I will rule
All animals are not equal; ratio is capex
God behaves the way I want
Savagery in the name of civilization
Paradise Lost or Ravished?
For every action of men, there is an equal and opposite destruction of the earth.
In cause-and-effect relation, we forget what's past will not be future
Today's comfort (plastic) is tomorrow's discomfort (microplastic)
One cannot step twice in the same receding river
To change or save, that's the question

CONTEMPORARY

Wild Turkeys

Dolo Diaz

At the end of the Zinfandel Trail,
after the gulch with the deep-throated creek

and tall interlaced black oak trunks
cresting their canopy,
after the winding path
of red earth that dives into
a tunnel of greenery
and opens into the succulent field
of fresh moist grass
speckled with dainty yellow primrose,
after the pond where madrona branches
dip their fingers,
and the migrating ducks—
with their emerald mating neck feathers—
splash with abandon,
after the lone deer
that startled and showed
its downy fanning ears
before leaping back
into his forested home—
after all that:
the flock of wild turkeys.
Not a single timid bird
blending with dried branches,
but a dozen of you,
a small battalion.
In your stripped feathered armor,
I recognized
the headgear of warriors.
In your noble purple necks,
scarlet snoods and wattles—
the hallowed regalia.
You walked,
owning the path, moving
with feathery confidence,
weighty birdiness,
the stride of a noble creature.
The ancient owner of the land,
the native animal—
more than the wild horse,
the fox,
and even the deer.
Never before had I witnessed
your majesty,
your panache,
your sobering beauty.

CONTEMPORARY

White Egret

Dolo Diaz

Still as marble.
Walks with thready blue legs.
How can they bear its weight?
Walks and freezes
in mid-step. What did you see?
All neck looking forward.
In profile, large orange beak.
Neck,
now beak,
neck,
now beak.
Silky feathers waving in the breeze.
Revealing their length,
proving it is not marble.
Neck undulates with each step,
as if balancing out the center of gravity.
A camel of the marsh.
An impossible white.
Dwarfing all the other white birds.
And then,
as if all this was not enough,
this fantastic creature
takes flight.

CONTEMPORARY

Dream a river

Jeff Howard

He wanders in a dream, untouched,
stainless, inert.
Her ganglia are wired directly
to the pleasure centers of
digital commerce.
In the yard, children
toy with inertia
as children always have.
For them, nature is that vacation place,
a sunrise (rarely seen),
a thunderstorm interrupting a late summer afternoon,
rainwater carrying bits of polystyrene into the storm drain.
As the storm pulses, dusk

seeps early into the room
and, unnoticed, the world folds upon itself
as it always has.
Magnetism drives the motor, and Einstein's
equations drive the magnetism.
Into the stale house fan blades pull
curlicues of air fresh as the moist breath of the
tundra, the lake dunes, the
trembling meadow of an era before
time itself.
Beneath the streetlight,
along the granite curb,
water and gravity move together
as a living thing.

About the poets

Wendell Erdman Berry (born 5 August 1934) is an American novelist, poet, essayist, environmental activist, cultural critic and farmer.

Edward Thomas (1876–1917) was a British poet who began to write poems (with the encouragement of his friend Robert Frost) at the age of 36, and died in the battle of Arras in 1917 aged 39. Even so, he left us some of the finest poems in English.

Sandra M Grayson's poetry and fiction explore intersections among nature, communication and worldviews. Through her website *Anumpa Nan Anoli* (https://anumpanananoli.lh1c.com/), she is helping to preserve traditional Choctaw stories.

Danny P Barbare resides in the US. His poetry has been published widely, most recently in *California Quarterly*, *Birmingham Arts Journal* and *Cardinal Sins*.

Ann Hart is a poet, writer and teacher in Central Illinois, USA. Her work can be found in many publications including *Cider Press Review*, the *Bangor Literary Journal* and the *Monterey Poetry Review*. She was the 2016 Winner of the Champaign-Urbana Mass Transit District 'Poetry on the Bus' and is an editor for *CU Haiku*.

Pulkita Anand is an avid reader of poetry. She has also translated one short story collection, *Tribal Tales from Jhabua*. Her creative works have been published in various magazines.

Dolo Diaz is a poet and scientist whose work explores the intersection of the physical and emotional. She began writing poetry in 2025, and her work has been accepted by *Right Hand Pointing*, *Moss Puppy Magazine* and *Star*Line*.

Jeff Howard lives in the Columbia River valley by way of the Allegheny River valley, the Mississippi River valley, and valleys beyond. His work, which has appeared in *Green Ink*, *The Thinking Republic*, *Moonflake*, *EAP: The Magazine* and elsewhere, reflects on the nature of consciousness in an era of ecological-tailspin-amid-ecological-belonging.

Fiction section

Edited by Joe Gray

Joe is a field naturalist and conservationist who lives on the island of Great Britain. He writes eco-fiction under the pen name Dewey Dabbar.

If Trees Could Dream

M. Frost

With the mountain peaks between him and the early morning sun, Dr. Ren Aoki padded among the giant trees in near darkness. He loved how quiet his footsteps were against the forest floor, how the morning was pierced by the sound of birds—the conversations of tanagers interrupted by the sharp raps of a woodpecker.

He studied his old friends, the Giant Sequoias, with now-educated eyes, noting evidence of symbiosis or competition with other life in their ecosystem. He knew there was more that he could not see, fungal networks deep in the root systems, but he had chosen not to bring his pad or his probes.

Ren had come back to the biological reserve where he started his career to celebrate the completion of his doctorate. After seven grueling years of laboratory work, data analysis and manuscript preparation, even his vibrant love for trees had faded.

I want to see trees as something more than data points again.

He hiked deeper into the biological reserve to places people normally were not allowed, but he had received special permission to go based on his prior work there as a forester. The yellow-green light filtered into the forest through open spaces here and there. Ren was so enchanted by the way the light changed the whole forest that he almost walked right past it.

His feet simply stopped moving. Ren looked around, confused.

For his dissertation work on how trees communicate, he had visited hundreds of forests, studied thousands of trees—not just the ones on Earth.

This tree was small by any standards, smaller even than the understory trees, the young white fir and black oak. It was completely dwarfed by the giants that surrounded it like guardians.

He couldn't imagine how, given the dense canopy above, but a beam of light fell directly on it, staining the needles silver and the trunk a deep red.

Redder than the redwoods. Red like blood.

Then Ren blinked. Among the coniferous needles were bright green leaves that he nearly was certain would prove deciduous. As he came closer, he noticed how fragrant the tree was, distinct even among the gorgeous smells of the forest.

It has flowers too.

They were small and white, just a few and mostly high in the branches.

I think this is a brand new species. How is that possible?

For the first time that day, Ren regretted that he had not brought any of his equipment. All he had was a small emergency communicator with his survival gear.

He spent days with the tree, trying to memorize his observations about the bark, the needles, the leaves, the flowers, what he could see of the root structure.

The way light fell on it for over six hours a day when the rest of the forest floor around it was in twilight.

He slept beneath the red branches. He often was restless at night but found that with this tree, he dreamed of a window that looked out onto a canvas of stars. He dreamed of other trees like himself—a small nursery of them in large pots, digging roots into the captured soil of a distant homeworld.

Is that what this is? An alien tree brought to Earth?

For an introduced species to end up deep in a biological reserve went against every rule on every planet Ren knew.

When he realized he could not stay any longer—the approval stipulated the number of nights he could spend—Ren was torn.

If I report this as a possible introduced species, it will be moved at minimum, perhaps destroyed.

In the days he had spent with the tree, he had made a startling discovery, one that transcended what he thought was possible.

The little tree and its neighbors were tightly linked. The sequoias closest to it were thriving in a way Ren never had seen. He had created symbiosis scores as part of his dissertation work and the scale he found here was log-steps beyond anything he ever had measured.

If this little tree is removed, some of the trees around it may die, they are so tightly linked.

He took one last look at the tree and tried to fix the location in his mind. Then he turned reluctantly to hike out.

* * *

When he reached the station, Ren checked in with the ranger.

She introduced herself as Marissa. "How was your stay?"

"Good." He replied, remembering how it had felt to let go of his stress as he walked underneath the trees.

"Find anything interesting?" She asked.

Ren felt like he had made a discovery, but now he couldn't remember it.

"Oh, probably." He replied sheepishly. "Mostly I hiked or studied the trees."

"I know what you mean." She replied. "Sometimes after I've gone in for a few days, I just forget everything I'm doing. It's nice."

He agreed that it was nice.

* * *

Ren had forgotten about the tree until he had a dream about it.

The dream felt hazy, like he was on drugs. He was walking down a corridor, but then it felt like something was stinging him. Ren thought he was the tree—a tree that had been bathed in light and love—only now the light was fading.

He kept feeling the pricks over and over. One particularly sharp stab woke Ren up.

His hand actually hurt and he rubbed the palm. Then memory returned and he was in shock.

How could I possibly have forgotten about that extraordinary tree?

Supported by his mysterious funders—a group simply called Cortex—Ren had secured a faculty position. But because he carried two courses this term at his funder's behest, he had to wait weeks before he could return to the biological reserve.

He didn't know why he felt so anxious all the time, like there was something he should be doing. One day during a lecture, he stopped talking for almost a full minute before he came back to himself. *At least half the students are remote so I didn't have to watch them snigger.*

He made the trip to the reserve in record time. Once inside the sequoias, he moved as fast as he could. This time, he had brought gear, a lot of it. The pack weighed him down, but his anxiety fueled him forward, so he would hurry for a time then come to a panting halt until he could catch his breath.

Ren found the tree more easily than he had anticipated—then he was heartbroken.

It wasn't dead, but it wasn't good.

All the deciduous leaves—he now was certain that's what they were—had fallen to form a brown-gold heap around the trunk. Even the needles were yellowed, some of them shed onto the pile of leaves.

The sequoias around the tree also had lost the spark he remembered. After careful study, Ren realized that something strange was happening—the flow of energy between them had been reversed.

The little tree was helping them. Now they are helping it.

When Ren put his hand against the trunk, he remembered the time when he was a boy and his beloved great-grandfather had died. The pain of mourning welled up in him again.

The tree is grieving. It lost something. Someone.

Trees aren't human. He tried to tell himself. *They can't feel emotions the way we do.*

Ren worried that the dream had made him anthropomorphize the tree, so he tried to anchor himself in science.

He pulled out his pad and probes to try to find evidence of disease. There was none.

He tested the soil nutrients, pH, moisture, everything. The metrics were within the normal parameters expected for the reserve.

Remembering the sting on his hand, he looked everywhere for predatory insects. He found nothing unusual.

What was unusual was the light. The rays that used to touch the tree were gone completely.

Ren stretched out on his back and examined the branches of the sequoias above him and the tree. He spent an entire day doing that, studying the angle of the sun. The next day, he strapped on his augmenters, took the laser chainsaw, and ascended first one sequoia, then another. He pruned key branches, fixing stabilizers to the trimmed wood to guide it down where it would land softly away from the little tree.

As he worked, light began to pierce the canopy and touch the dull red branches and the yellowing needles.

His allotted time was up. He looked at his pad with its data, then he looked at the tree.

I'd like to remember this time. Ren pleaded.

* * *

Marissa still ran the desk at the ranger station. "Did you have fun?" She asked him.

Ren glanced down at the pad. He had checked it before he left the forest to discover that the data were gone. Not deleted. Simply vanished—as if the readings never had been collected.

At least I haven't forgotten the tree yet.

Assuming this really happened and it wasn't just a dream.

"Has there been anything abnormal in the reserve since I was here last?" He asked Marissa carefully.

"Abnormal?"

"Infestations, tree deaths, chemical use, anything?"

She shook her head, looking puzzled. "No, why? Did you see anything?"

"No." Ren lied. "It's just that I'm giving a new lecture on threats in biological reserves this coming term and wondered if you might have some case examples."

Marissa smiled gently. "This biological reserve is probably the most stable—ecologically or otherwise—in our entire network. Not much happens here."

Then she added. "Honestly, I think you're the only scientist who has come here in at least a decade."

"Good to know." Ren replied.

* * *

Given his course load and demands from his funders to study a forest on one of the inner colonies that had an unusually high symbiosis score—followed by a late snowstorm in the reserve that shut the trails—Ren couldn't get back to the tree for nearly half a year.

For months after he had left, Ren continued to feel anxious. He would wake feeling lost and bereft, like there was a light in the universe that had gone out.

Strangely, when the snow came to the reserve, Ren had beautiful dreams where the silence around him and the blanket of white were a comfort. After that, while Ren waited for the snow to melt, he felt the anxiety lessen.

Spring was coming to the reserve and for the first time that year, Ren was hopeful. Just in case, he brought the gear, but took his time hiking in, trying to enjoy the sound of birds and the scent of the forest floor.

The forest always smells special in the spring.

The light in the grove was different now—more diffuse, but still yellow-green. Ren was delighted to find early buds for the deciduous leaves on the tree. The needles were lush, full, and silver-green.

Ren studied the trees and other plants around the tree and felt they might be in balance now, energy flowing in both directions. Far up in the canopy of giants, he could see new growth in many directions, but none into the space he had cleared to let the light in.

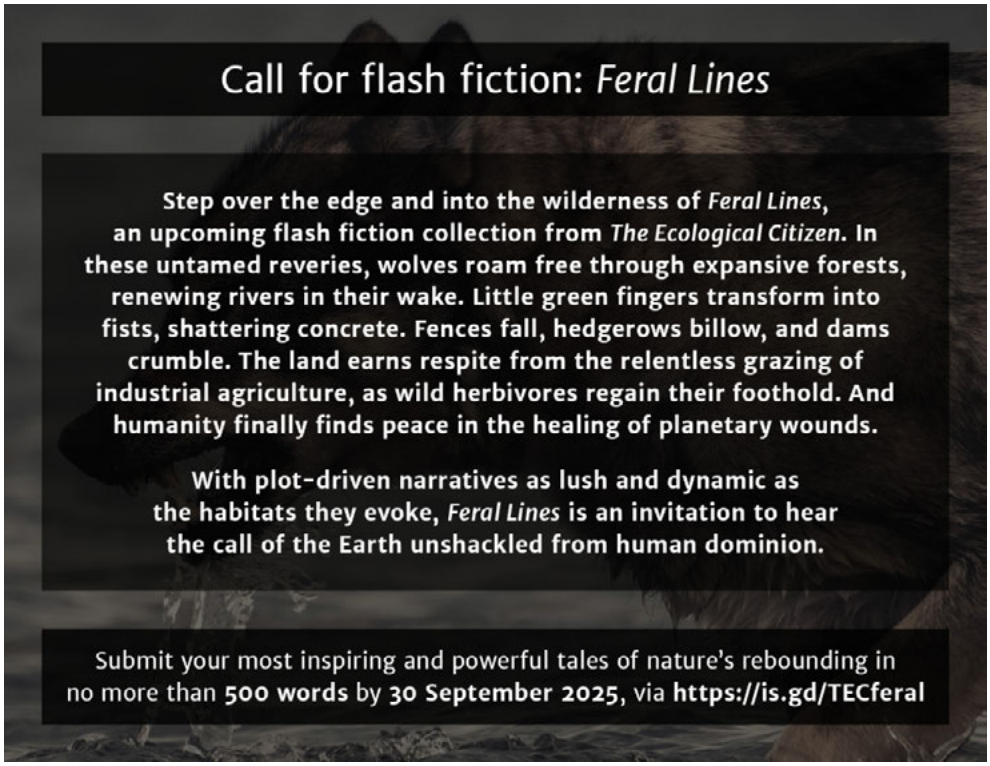
He leaned back against the trunk of the tree to rest.

When an owl called sometime in the night, Ren woke. Through the opening in the branches, he saw stars.

Which one is yours? He wondered, then returned to dreams of another man on a distant world who also slept against a tree.

About the author

M. Frost is the pen name of a scientist working in environmental health and One Health, whose creative work has appeared in various journals and magazines including *Strange Horizons* and *Abyss & Apex*.



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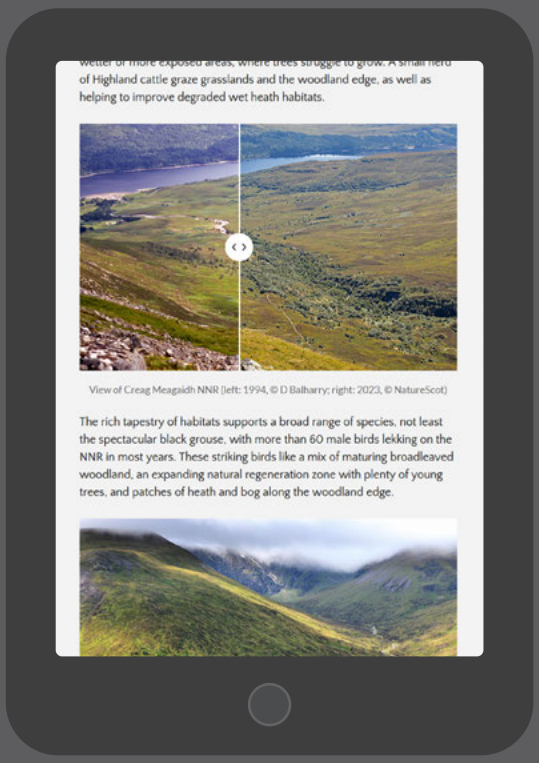

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