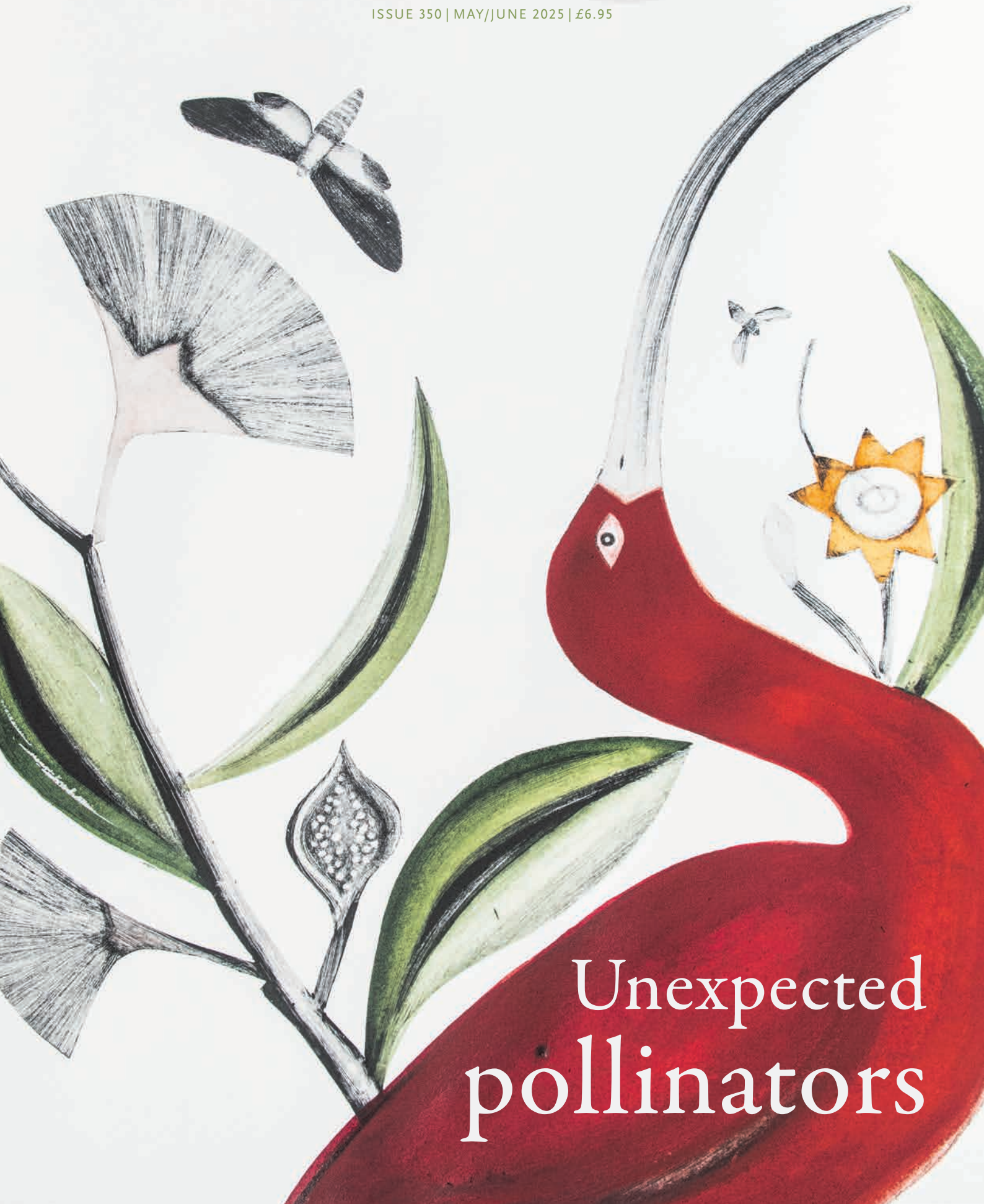
RECONNECTING WITH THE LIVING PLANET

Resurgence & Ecologist

ISSUE 350 | MAY/JUNE 2025 | £6.95



Unexpected pollinators

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Artwork by Kristina Gauer
Detail from the illustrated poem
The Peace of Wild Things
by Wendell Berry
www.kristinagauer.com

Unsung heroes

Bats, mice, lizards, slugs, snails, fish, beetles, spiders, frogs, crabs, ants, moths, woodlice, tortoises, snakes, earwigs, wind, water and... humans

Unsung heroes – as this latest and somewhat exuberant early summer issue will show – can come in many guises.

Some come with fur or feathers, some have wings, and some carry their homes on their backs. Some swim, some slide or slither, some creep and crawl. And for the most part, none will ever know they are unexpected pollinators.

Some, of course, come with two legs in a human body. Swap the word Influencer for Pollinator and you'll see how humans, some perhaps quite surprisingly, can become accidental pollinators too. I am not talking about the names you are used to seeing contribute to this magazine and other campaigning platforms, but about people you might not expect to be overly concerned about the state of the planet or the wellbeing of the creatures we share it with.

Lydia Elise Millen struck me as just such a person. She is a high fashion influencer with a global reach of three million followers. Not someone, you might be tempted to assume, especially aligned with the values of other Nature champions.

But this is where you would be wrong. Lydia, as it turned out, is also the author of a charming book called *Evergreen* – written primarily for her fashion followers and thus for the mainstream – which celebrates Nature and shares her joy of gardening and honouring the seasons. What's important here is that Lydia's book does not preach to the converted and that's what makes her an unexpected pollinator.

She and her husband, Ali Gordon, also keep bees! And you can read an extract from *Evergreen* on the topic of summer's generous abundance on page 40.

Then we have the best-selling children's author M.G. Leonard, who has become known as 'the Beetle Lady'. Beetles, as it happens, are unexpected but important pollinators too. And in her interview in this issue, she tells our writer Katie Dancey-Downs how she went from being petrified of anything even remotely bug-like to making the golden scarab beetle the heroine of her new book.

The artwork on page 28 that opens this special theme shows a miniature paper sculpture of two brown-throated sunbirds created by two India-based artists, Nayan and watercolourist Venus Bird. This image is part of the duo's Unexpected Pollinators project, which they say showcases the importance of all creatures, large and small, but especially the pollinators we might not always think of as being important in this way.

And finally, the lead story in our Ecologist section comes from the pen of another activist Pollinator but one whose name you may already know, queer freelance educator and conservation forester Kara Moses, who offers a thoughtful and timely exploration of heteronormativity – the assumption that everyone is 'naturally' heterosexual and that this is both 'normal' and superior to homosexuality or bisexuality – in conservation practice. Again, an assumption we need to be challenging, and Kara explains more about why this is important.

Susan Clark
Editor of *Resurgence & Ecologist*

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Resurgence & Ecologist is published by The Resurgence Trust, an educational charity.
See inside back cover and our website www.resurgence.org for more information.
Views expressed in these pages may not necessarily reflect those of the Trust.

Unexpected pollinators

Issue 350
May/June 2025

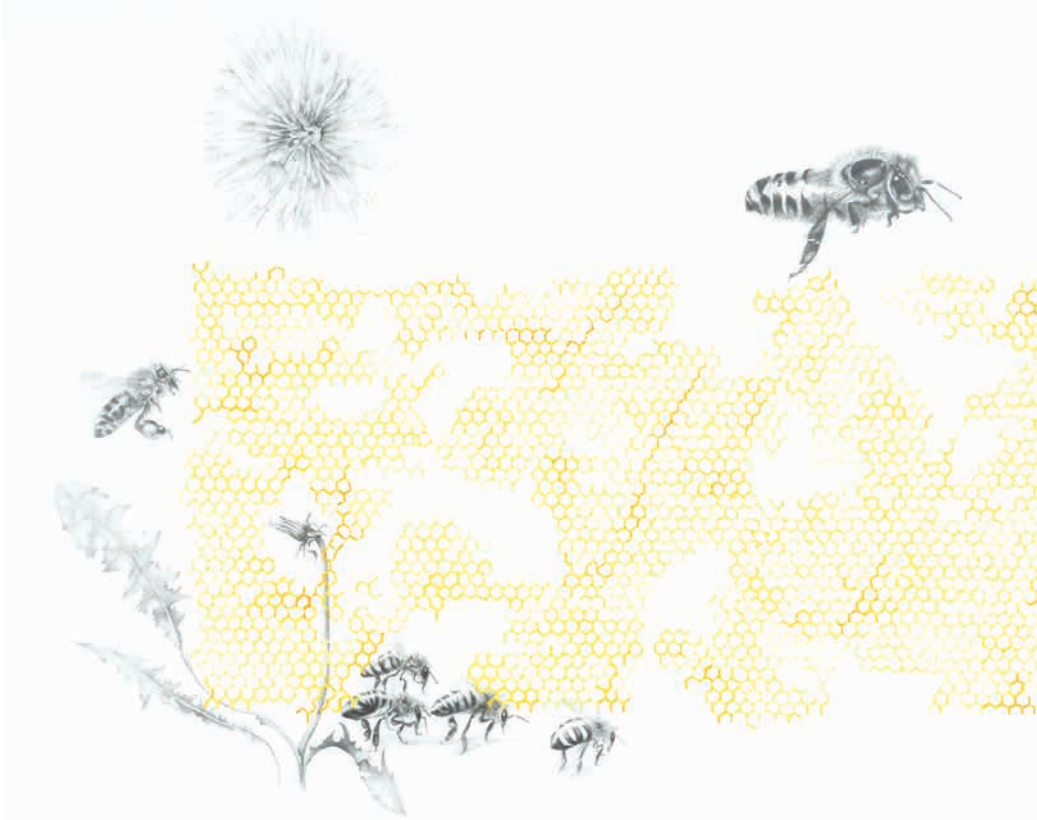
Mangrove by Beatrice Forshall
Hand-painted engraving from
The Book of Vanishing Species
www.beatriceforshall.com

Ecologist

Connected life

The slow read

Unexpected pollinators



Art & culture

Wisdom & wellbeing

Reviews

Noticeboard

Photo © Klara Kulikova / Unsplash

ACTION

HELPING HEDGEHOGS

Did you know that hedgehogs are an important indicator species? Their own needs are modest, which means that if they are struggling, so is the habitat, and that, of course, will impact other species too.

British Hedgehog Awareness week, organised by The British Hedgehog Preservation Society, runs from 4 to 10 May with the catchy theme 'Give hedgehogs the edge!' This is to encourage homeowners to create safe havens at the edges (or margins) of their gardens.

Tips for doing this include creating dedicated hedgehog highways so the animals can cross or pass through hedges and fences and boundary walls, and making log piles and leaf heaps, which will attract the species hedgehogs like to eat.

According to the National Biodiversity Network, rural hedgehog populations have plummeted, declining by between 30 per cent and 75 per cent since 2000. But – happily – urban populations appear to be stabilising, and may even be on the increase, so making the effort to make these small adjustments really does help this species.

www.britishhedgehogs.org.uk

ACTION

NO MOW MAY

No Mow May is Plantlife's annual campaign that urges all 'lawn' owners to resist the urge to create stripes or a croquet lawn, and leave the grass to grow.

It might not win you Brownie points with disapproving neighbours, but allowing the grass to grow longer and wild flowers and weeds to take root is the best way you can both welcome and support pollinators by creating a safe habitat and a source of nectar in your own backyard. And you might even enjoy the liberation of leaving the lawnmower in the shed!

tinyurl.com/donotmow

EXHIBITION

WE FEED THE UK

Over the past year, we have featured a number of articles showcasing the inspiring work of photographers and poets taking part in the ambitious year-long We Feed The UK project from The Gaia Foundation. Now you can see an exhibition of the complete collection at The Royal Photographic Society in Bristol from 3 April to 22 June 2025.

tinyurl.com/wefeedtheuk

Photography by Yvette Monahan for We Feed The UK

RIPPLES

If you have been inspired to do something or have an event/project you'd like to share with the Resurgence community, let us know. Email **editorial@resurgence.org**

Resurgence events

MAY 8 15 22

Championing the Pollinators: The Biologist, The Broadcaster and The Beekeeper

A trilogy of talks offering three unique perspectives on those keystone beings – the Pollinators

What's life like in their world right now, what challenges are they facing, what opportunities are they sensing, and what might they ask of us moving forward? Hosted by Pete Yeo. Speakers are Dave Goulson, Kate Bradbury and Michael Thiele.

Thursdays 7–8.30pm (BST) via Zoom

MAY 12 JUN 2

Monthly Meditation for Members

Early-morning guided meditations that will support you to live in deeper connection with the human and more-than-human worlds and with yourself. Start your day, your week and your month with peace and presence.

Mondays 7.30–8am (BST) via Zoom, free

MAY 13 JUN 10

Resurgence Life Drawing Group

This is a friendly, mindful, unguided group of artists celebrating the human form. We start with some quick poses for you to draw to warm up and then try some longer poses so that you have more time to fine-tune your drawings.

Tuesday 7–9pm (BST) Hartland and via Zoom

MAY 20 *to* 29

'Intertwined' Exhibition

Helix Nature Art and Stephen Raff Photography present a joint exhibition of Nature-inspired art and photography. Together these two artists showcase their love for Nature and its cycles, with monochrome art and imagery intertwined with life and mindfulness.

Daily 10am–3pm (BST) Hartland

MAY 28

Resurgence Talk: Chris Park – Beekeeping Mythology & Folklore

In this talk, with storytelling and Q&A, Chris Park will take us on a journey through some of our mellifluous and mysterious histories with honeybees, their miraculous ways, sweetness & light, darkness & venom, widespread pollination and unswerving sense of purpose.

Wednesday 7–8pm (BST) via Zoom, free

JUN 12

Connecting Earth and Self: The Sound of Earth and Heart

A discussion, meditation and Q&A with Padma Aon and Satish Kumar

The Earth is as much within us as it is outside of us. We can access the Earth within whenever we choose through sound and mindful meditation. Earth within us has a frequency, and we can tap into that frequency through special forms of music and meditation to instantly ground, calm, stabilise and soothe ourselves.

Thursday 7–8.30pm (BST) Hartland and via Zoom

JUN 17

Resurgence Earth Festival: Summer Solstice

Guided meditation, Nature connection and self-reflection

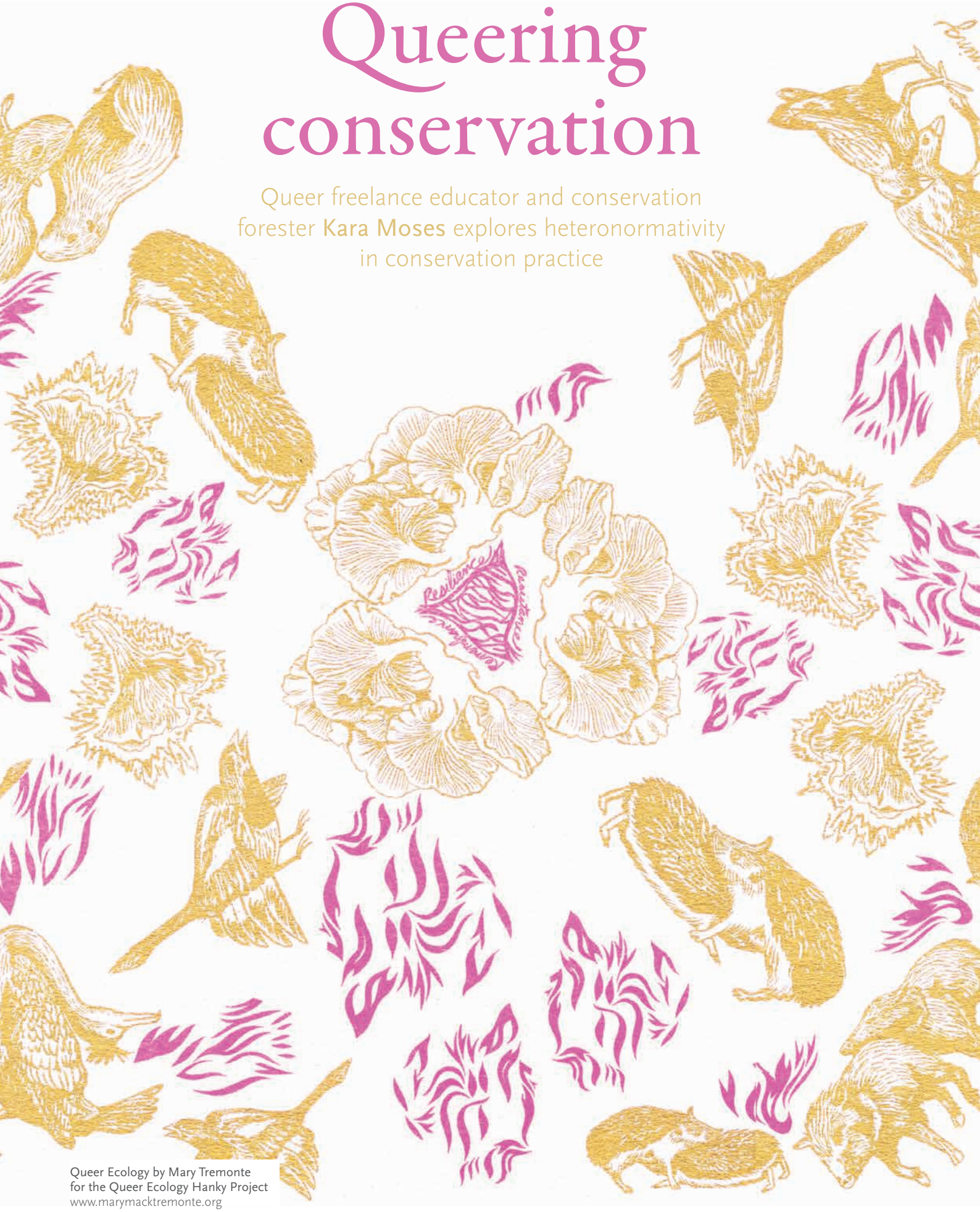
Join us to celebrate this high time and the abundance of Nature. Let us honour the powerful energies of the Earth and sun, and their effect on us, with guided meditation, Nature connection and self-reflection.

Tuesday 6.30–7.30pm (BST) via Zoom, free

Details for all events can be found at **www.resurgenceevents.org**

Queering conservation

Queer freelance educator and conservation forester **Kara Moses** explores heteronormativity in conservation practice



Queer Ecology by Mary Tremonte for the Queer Ecology Hanky Project
www.marymacktremonte.org

Transgender clownfish, gay penguins and non-binary fungi. Female hyenas with pseudo-penises, lesbian seagulls and intersex slugs. Welcome to the wonderful world of queer ecology. That is, welcome to the world! Nature is far more queer than we can possibly imagine, and certainly more than most people realise.

The celebration of the staggering array of gender and sexual diversity in the more-than-human world is a good starting point for queer ecology, but it goes much deeper than this. It draws upon queer theory's critique of gender- and sex-based hierarchies and applies this to ecological and evolutionary thinking.

We might describe it as a critical lens that challenges normative categories (and heteronormativity within ecology more broadly) and celebrates all the fluidity, diversity and complexities present in Nature as it truly is – a continuous state of being and flux, rather than fixed in rigid categories. It invites critical scrutiny of norms, binary distinctions, hierarchies, and power dynamics. By extension of this, it fundamentally rejects anthropocentrism, challenging human assumptions of, and projections onto, Nature, especially ideas about which organisms, species, and individuals – and the behaviours and life histories they choose – have the most value.

Homosexuality in the animal world has long been dismissed, erased or, where acknowledged, portrayed as a curious aberration rather than a valid part of a species' behaviour, culture and reproductive strategy. Strong heterosexist bias amongst scientists, underrepresentation of queer people within the field, and outdated homophobic cultural/moral 'norms' have all contributed to this. But as queer ecology gains more traction and awareness, with organisations such as the British Ecological Society and The Wildlife Trusts talking about it openly, the list of species recognised as practising same-sex sexual behaviour is ever growing.

How does this relate to biodiversity conservation? Well, for starters how can we expect to support the reproduction of threatened species if important aspects of their reproductive strategies are denied or misunderstood? Same-sex partnerships often play an important role in raising the next generation – in some cases more successfully than heterosexual pairings – and sexual liaisons can strengthen bonds between non-parental allies that support both parents and offspring.

As queer ecology gains more traction and awareness, with organisations such as the British Ecological Society and The Wildlife Trusts talking about it openly, the list of species recognised as practising same-sex sexual behaviour is ever growing

In the way that queer theory recognises the importance of fluidity (particularly with regard to identity and sexuality as fluid and changeable phenomena), queer ecology challenges the mindset of 'fixedness' that upholds heterosexist notions of fixed identity, sexuality and gender roles. It challenges western science's rigid categorisation, reductionism with its implicit heterosexist assumptions, and problematic binaries (such as human/Nature, natural/unnatural, rational/emotional, mind/body, male/female, wilderness/civilisation, etc). Complexities of the world, reduced to simplistic opposites where one always has greater value. This mode of thinking has long been used to denigrate expressions of human diversity as 'against Nature' or 'unnatural' and to legitimise the oppression of sexual and gender diversity in particular (as well as other forms of diversity), and it doesn't actually reflect the true nature of things. These are the shaky foundations conservation practice is firmly built upon.

HETERONORMATIVE CONSERVATION

Heteronormativity is the assumption that everyone is 'naturally' heterosexual, and that this is 'normal' and superior to homosexuality or bisexuality, which, by implication, must be unnatural and abnormal. It also assumes a gender binary and that sexual/romantic relations should only be between these two genders – often with patriarchal undertones. It is inherently hierarchical, othering and prejudiced, though often unconscious.

Heteronormativity shows up in conservation in many ways. Conservation colludes with the erasure of

homosexuality in the non-human world through focusing solely on heterosexual breeding pairs. The internal culture of many conservation organisations reflects the wider dominant heteronormative culture we live in, with leadership and decisions being dominated by white, cisgendered, heterosexual men. The specific contributions that the queer community could make to help meet the biodiversity crisis are often overlooked, or at best tokenistic expressions of solidarity to garner more support.

Conservation operates on a power differential between human and non-human animals. Human intervention is guided by notions of value chosen by humans; values which often centre our needs and desires – whether this is an economic, ecological, or aesthetic value, or even the importance of Nature-connectedness for human wellbeing.

Within the patriarchal culture of the west and the binary view of Nature and gender, culture is masculinised and rooted in rationality and objectivity. Intellect is valorised while feeling and intuition – seen to be animal and female – are devalued. This is used to justify control and domination of Nature, albeit under the guise of 'Nature conservation'.

A QUEER ECOLOGICAL APPROACH

A queer ecological approach would necessarily decentre humans and critically reassess power relations between humans and other beings, as well as acknowledge and support same-sex relations and gender diversity within human and non-human communities. It would recognise and honour the agency, culture and feelings of non-human species. It would put into practice the queer ecology principles of embracing fluidity, change and complexity, and empower queer perspectives and leadership, valuing non-rational faculties in operations and organisations.

There is a fundamental conflict between queer fluidity and traditional conservation's tendency to be limited to single-species-focused, control-based and outcome-driven approaches that aim to maintain – to 'conserve' – stasis. This is where we begin to synergise with approaches such as rewilding, with its relinquishment of control and fixed outcomes, decentring of human agendas and clear challenge to the philosophies and practices of traditional conservation. Rewilding, however, lacks a liberatory lens, which has led to some major conflicts amongst communities that have felt it to be imposed upon them by outside forces, with colonial undertones. Combining principles and practices between these approaches could be a worthwhile exploration.

A queer ecological approach would necessarily decentre humans

Recent research in social psychology finds that the same psychological mechanisms that underlie racism, sexism and other forms of prejudice also give rise to speciesism. People who express stronger generalised prejudice show greater indifference to the biodiversity crisis, greater enthusiasm for the exploitation of Nature, and stronger resistance to action on climate change. In other words, the Nature crisis is a crisis of oppression, and any approach that is not explicitly anti-oppressive may not only be ineffective, but could even inadvertently work to strengthen generalised prejudice, making matters worse.

BEYOND QUEER ECOLOGY

Ultimately a queer approach is also a decolonial, anti-racist, anti-capitalist, feminist, class equity approach. These perspectives, of course, all intertwine, like the mycelial network in a woodland, with fruiting bodies popping up in different places but ultimately rooted in enmeshment. Recognising that the Nature crisis is fuelled by the drive to maintain domination by those with power and privilege, conservation must act in solidarity with communities marginalised by this domination.

These communities, many of whom are also reimagining human-Nature relationships, must come together and act in solidarity. We have much in common, and we are stronger together. In doing so we can liberate the wondrous unseen world of, as queer ecologist Bruce Bagemihl calls it, *biological exuberance*: "The unspeakable inexplicability of Earth's mysteries – which are as immediate as the next heartbeat ... an affirmation of life's vitality and infinite possibilities: a worldview that is at once primordial and futuristic, in which gender is kaleidoscopic, sexualities are multiple, and the categories of male and female are fluid and transmutable. A world, in short, exactly like the one we inhabit." R

Kara Moses is a queer freelance educator, conservation forester and facilitator of radical Nature connection, working on an action research project exploring Queering Conservation, in collaboration with Common Cause Foundation.
www.RewildEverything.org

Photos © Nathan Akehurst

Returning to Syracuse

In a poetic yet haunting reportage drawing parallels between the mythical tales of Syracuse and the stark reality of the Central Mediterranean, now an 'ocean grave' for refugees fleeing war and climate catastrophe, a recent piece by Nathan Akehurst exposes the brutal response of states: hoarding resources, fortifying borders, and entrenching the colonial divide between Europe and Africa. Writing from the search and rescue ship *Humanity 1*, which by the end of 2023 had rescued over 3,600 people in distress at sea, Akehurst reflects on the human cost of fortress policies and the fragile hope that remains. R

Words by Yasmin Dahnoun, Editorial Assistant. This is a summary of the article written by Nathan Akehurst and published on *The Ecologist* (6 February 2025). To read the article in full visit tinyurl.com/nathan-akehurst

This article was funded, in part, through the Ecologist Writers' Fund: theecologist.org/writers-fund

Cover painting for *The Red Kite's Year*, Dan and Rosie Powell
www.powellwildlifeart.com

The return of the red kite

Red kites, once nearly extinct in Britain, have made an extraordinary comeback, with Mid Wales at the heart of this conservation success story, writes **Roman Goergen**

Gigrin Farm, near Rhayader in Mid Wales, is world-famous. Photographers gather here year-round to capture close-up and spectacular shots of a bird that could now rival the dragon as the emblem of Wales: the red kite. And yet, just a few decades ago, this bird of prey had almost completely disappeared from Britain.

It all began here in Rhayader in the early 1990s with a spaniel named Jamie. "Jamie kept killing rabbits, and the carcasses were left out for the few kites that remained," recalls Dominique Powell, owner of Gigrin Farm. As more and more birds began to appear, the RSPB approached the farm with the idea of turning it into an official feeding station. Such help was desperately needed, as red kites were struggling at the time. In 1989, only 52 nests were recorded in Wales, and genetic studies conducted in 1997 suggested that, at that time, possibly just a single successfully breeding female was responsible for the survival of the entire Welsh population. "When we started feeding red kites here in 1992, only four or five birds would come each day. Today we have around 200 kites in the summer and up to 500 in the winter," says Powell.

We watch the photographers' hides on the farm, positioned in front of the field where, every afternoon, red kites are offered a rich meal of beef leftovers from a nearby abattoir. Even before the first pieces of meat are laid out, a swirling cloud of over 100 birds forms over the field. Then, at precisely 3pm, the meat is scattered, and the kites dive. They snatch a piece in their talons, climb back up, and twist onto their backs in mid-air to fend off competitors. Red kites have a remarkable ability: they can eat their prey while flying.

These majestic raptors with their characteristic forked tails were considered extinct in England and Scotland as early as 1870. One major factor in their decline was the Victorian-era hobby of egg collecting, which took a severe toll on their numbers. Additionally, red kites were seen as competitors to human hunters, particularly in grouse shooting. To this day, Scotland remains a more dangerous place for red kites compared to other parts of the UK, as driven grouse shooting is still widely practised there. Many British farmers also feared the majestic bird, with myths circulating that a red kite could snatch an entire lamb.

By 1930, only a tiny population of an estimated 20 individuals survived in the mountainous region of Mid Wales. In 1989, a highly successful reintroduction programme was launched in England and Scotland, with red kites brought in from Spain, Sweden and Germany. Meanwhile, conservationists in Wales took a different

approach, focusing on rebuilding their severely depleted population from within. Feeding stations like the one at Gigrin Farm were established to support the birds.

"When the reintroduction project in England and Scotland began, we feared that the kites in Wales might not survive. Now we can see that the Welsh population has grown significantly and has even expanded into England," explains ornithologist Ian Carter, who, at the time, oversaw the translocation of red kites from mainland Europe for English Nature (now Natural England).

Mid Wales' Celtic rainforests have played a crucial role in the resurgence of the red kite. These temperate woodlands, characterised by ancient oaks, moss-covered branches, and thriving undergrowth, provide an essential habitat for a diverse range of species. The forests have long served as nesting sites for red kites, ensuring both shelter and a stable food supply. Ben Bonham, a conservation officer with the RSPB, underscores their importance: "Lots of these woodlands are massively important for the woodland bird communities and their lower plants, but unfortunately they aren't always in the best condition just because they haven't been managed in the right way for a long time," he says, adding that conservation efforts now focus on enhancing these environments. "We're managing three areas of woodland, making them better for Nature. We're also looking to expand the woodland so that it becomes one interconnected block, which will obviously be able to support more species and the movement of different species."

Red kites have demonstrated remarkable adaptability, expanding their range beyond their traditional upland strongholds. "Some people in the early stages really thought it wouldn't work," says Carter. "They thought this was a rare bird. It was doing really badly in most of Europe. People came to think of it as a bird of remote mountainous areas where remnant populations had managed to survive." He explains that red kites were driven to upland areas due to persecution, but they are not strictly birds of the mountains. "Now we see them thriving in lowland areas, near towns, and even on the edges of cities."

However, human influence has not always been beneficial. Illegal poisoning remains a significant issue in some areas, particularly in Scotland, where red kites have been slow to recover due to their proximity to grouse moors. "On the Black Isle, where red kites were reintroduced at the same time as in England, their population has remained artificially low," says Carter. He attributes this to illegal persecution, explaining that while the release site itself is largely lowland farmland, nearby grouse moors pose a significant threat. Poison baits intended for other predators also claim many kites as unintended victims. "There's a massive contrast between what's happened on the Black Isle and in southern England, where essentially the same number of birds were released over the same period. In southern England, we now have between 6,000 and 7,000 pairs of red kites, while on the Black Isle the population remains under 100 pairs."

From the brink of extinction, red kites have made a dramatic recovery. The most recent surveys estimate over 2,000 breeding pairs in Wales alone, with populations in England and Scotland continuing to expand. "In southern England, the growth has been explosive. Some areas now have among the highest densities of breeding kites in Europe," notes Carter.

The great success of red kites in Wales is also due to people's attitudes. "Everyone here has a very positive view of the red kite because it is an important part of Welsh culture. Tourism is significant for us, and the red kite plays a major role in that," emphasises Powell, adding how in the 1990s the farm demonstrated to neighbouring farmers that kites are not capable of carrying off lambs.

> "Their recovery shows what we can achieve with sustained conservation efforts and strong public support"

The red kite's recovery serves as a model for rewilding efforts across Britain. Carter notes that red kite conservation helped pave the way for other species' return. "Reintroductions have become much more common in recent years. The first was the white-tailed sea eagle, and the red kite project used similar methods," he explains. "Since then, we've seen reintroductions of ospreys and sea eagles in southern England, and projects with birds like corn buntings, corncrakes and great bustards."

Looking ahead, Carter remains optimistic: "Come back in a few decades, and I think red kites will be the most abundant bird of prey in Britain, as it probably was in the past," he concludes. "Their recovery shows what we can achieve with sustained conservation efforts and strong public support." R

Roman Goergen is a journalist reporting on natural sciences, biology and ecology. In 2021, after spending more than a decade in Southern Africa, he moved to London, from where he continues to focus on international conservation issues.

Nature's Big Tech Champion

Susan Clark interviews tech entrepreneur and Nature champion **Dax Dasilva**, who is now using his money and his credentials as an unexpected environmentalist to showcase why we need to care more about the natural world, and to support those frontline Indigenous communities whose knowledge is key to understanding what we have lost and what we might still lose

When and where were you born? How was Nature a key part of your experience growing up in British Columbia? Can you share a scene when you were, say, seven years old that you still think of today? This could be a glimpse of wildlife, a wild river swim, cooking outdoors... Some small glimpse of something more important than yourself at such a young age.

I was born in British Columbia, Canada, to parents who had immigrated from Uganda. Growing up, we didn't have extravagant vacations but spent a lot of time outdoors and so I fell in love with Nature at a young age. My family loved camping in the mountains in the interior of BC, and our home in Richmond was surrounded by wetlands, immersing me in the natural world from a very young age.

My summers as a child often included family trips to Sheridan Lake in the Cariboo Chilcotin region of British Columbia. My dad's employer at the time had built cabins, which he offered as a retreat for employees. Every summer we would make the six-hour drive north, and this journey itself was an experience, taking us through some of the most stunning and contrasting landscapes BC has to offer: from the Cascade Mountains to alpine forests and then into the dry, rugged interior that looked like something out of the Old West. Towns from the gold rush and remnants of old logging operations – visible markers of how human activity had shaped the land. Those drives every summer deepened my appreciation for the province's diverse beauty, and the vast wildlife in Canada.

Fast-forward a decade and tell us about joining the anti-logging protests and your emotional response to that devastation and destruction of the environment.

This connection to Nature that had begun at a young age was shaken for the first time when I encountered large-scale environmental destruction. I first began my environmental journey over 30 years ago as part of the Clayoquot protests in Vancouver to oppose old-growth forest logging. No one had prepared me for the sight of clear-cut land that stretched for three hours of the drive to the protest. What had once been a thriving forest now laid bare as a barren, man-made moonscape. Hundreds of kilometres of trees had been logged, leaving only dead, grey branches behind. I remember feeling horrified, wondering where all that wildlife had gone. It was the first time I truly grasped the scale of human impact on the environment.

By the time I arrived at the anti-logging protests in Clayoquot Sound, over 1,000 people had already gathered. Tofino was buzzing with activity, and public spaces were filled with people from all over the world who had come to take a stand. I remember there was an overwhelming sense of urgency, a feeling that we were part of something historic. The protests were making national headlines, and when negotiations with Indigenous leaders finally happened, it felt like we were witnessing history unfold in real time.

Many environmentalists I've met since then have their own 'Clayoquot moment' – a defining event that turned

Dax Dasilva in the Pitt River Watershed, British Columbia
Photo © Alan Katowitz

> "This connection to Nature that had begun at a young age was shaken for the first time when I encountered large-scale environmental destruction"

them into conservationists. It also made me realise how easy it is for people to ignore what they can't see. When destruction happens in remote places, it is out of sight, out of mind. That is why storytelling and documentation are crucial, something I learned very early on as I founded my environmental organisation, Age of Union.

One of our biggest priorities is using film to bring these hidden stories to light. When we travel to places like the Democratic Republic of Congo, the Amazon rainforest, or Haiti, we go to extraordinary lengths to document and showcase these fragile ecosystems that are vulnerable due to their remoteness – because once people see what's at stake, then they will care.

How cut off is the tech world from what really matters, i.e. safeguarding our planet and all we share it with?

I believe there is a huge opportunity for the tech industry to play a bigger role in conservation. In tech, things move fast and are changing from year to year – an innovation that's groundbreaking today might be obsolete in five years. But Nature operates on a different timeline. A protected area, if left undisturbed, can last forever.

Tech entrepreneurs have the means to create a lasting legacy, and I'm starting to see more interest in that. There are real lessons that people who are in technology can learn from Nature – its adaptability and its resilience. Even when degraded, Nature has the power to heal itself, and I think that is something worth protecting.

Will AI save us all?

As more people turn to AI to provide real insights and predictions, I see its potential to illustrate to people the true value of conservation, of protecting vulnerable areas

Great blue heron, Kenauk, Canada © Age of Union

and of showcasing the ability for degraded ecosystems to come back to their natural state. Whether in the fight for climate change, or helping habitats for biodiversity, there is potential for AI to help us understand the value, capacity and future of Nature.

Part of what my organisation, Age of Union, aims to do is to help different boots-on-the-ground conservation groups learn from one another. Many of the smaller conservationists have limited teams, so we may see smaller organisations with limited resources use AI to fill operational gaps to increase efficiency for their own needs.

Share something about your key projects, including the Black Hole Experience arts projects and the Juma Institute for New Knowledge Centre.

Last autumn, I travelled with Dr Jane Goodall to the Amazon to meet with Juma Xipaia, an Indigenous leader belonging to the Xipaya people and founder of the Juma Institute, to explore the ways we could take inspiration from Jane's Roots & Shoots project to preserve Indigenous knowledge and traditions, not only for Indigenous youth, but for all members of the local and surrounding Indigenous communities.

Indigenous knowledge is key to safeguarding the forest – its ecological, medicinal, biodiverse and cultural value. If this knowledge is not passed down, the forest loses its greatest protectors. One of the many opportunities the new knowledge centre will offer is reinforcing knowledge within the village of Kaarimã, while also passing down ancestral wisdom rooted in the territory.

The Black Hole Experience (BHX) is a mobile exhibition created by Age of Union to explore another dimension of transformation, one that uses immersive art and spiritual exploration to inspire real change. We live in a time where deep reflection and connection are more important than ever, and BHX is designed to be a tool for that – helping people share, reflect, and reach one another on a deeper level through innovative means.

Sometimes we forget our place in the natural world, believing we dominate it rather than exist within it. But moments of awe, like standing before a vast ocean, or experiencing something as infinite as the cosmos, pull us back into that connection. BHX provides us a time to reset and step into a feeling of wonder, to reconnect with Nature on a deeper level.

With season 2 of BHX coming in 2025, we want to keep building on that experience; giving people a space to reflect, spark conversations, shift perspectives, and also inspiring a new generation of changemakers.

"In the end, the fight for Nature is a fight for our own survival. It's not just about saving species or landscapes; it's about securing a future for humankind"

Jane Goodall is widely recognised as an inspiring elder, as well as a conservationist and pioneering scientist. What have you learned from her?

Working alongside Jane Goodall has been such an immense honour. There is a tremendous amount to learn from Jane's life, most notably the power of her generosity and her incredible sense of purpose. She is in constant motion: travelling, working, advocating. Her energy is boundless because she's driven by a mission.

One of my favourite memories from our time together in the Amazon was sitting at the base of a tree, listening to Jane share a story about a fly. She was alone in a forest when a fly landed on her knee. She said instead of simply labelling it for what it is, she saw a small creature that is a living soul and part of the living tapestry of Nature – connected, whole, and full of meaning. That's the way Jane sees the world and Nature. Her purpose is unwavering, and that deep connection to the harmony of the natural world is what makes her work so powerful. It's a lesson in what's possible when you dedicate your life to something bigger than yourself, and it is truly inspirational.

What role do you hope you will be playing in the world when you too are about to celebrate your 90th birthday?

When we think about the future and when I turn 90, like Jane, I hope I'm still contributing to the fight for Nature. That is the kind of legacy I hope to leave. Hopefully, by then, we'll be looking at conservation differently, with more people than ever joining a collective effort. Because in the end, the fight for Nature is a fight for our own survival. It's not just about saving species or landscapes; it's about securing a future for humankind.

Age of Union was founded on the idea of bringing more voices into environmental conservation. Every year, I'm amazed at how much we're able to accomplish, and how many people join the movement. I'm excited to see where we go from here, because the more people who stand up for Nature, the stronger our chances of protecting it are for generations to come.

Please introduce your book, *Echoes from Eden: A Daring Voyage to Protect Earth's Last Wild Places*.

In 2020, I launched Age of Union, a non-profit environmental alliance that works on the ground to protect the planet's threatened species and ecosystems. I seeded the organisation by funding $40 million to support 10 environmental projects around the world.

In Canada, we protected forests, estuaries and watersheds that support keystone species like eagles and salmon. In Africa, we supported reforestation, agriculture, and community projects, in addition to helping local communities secure titles for millions of acres, including a wildlife corridor for eastern lowland gorillas. In Trinidad, we helped protect leatherback turtles. In Indonesia, we secured forests for gibbons and orangutans. And off the coast of Europe and Africa, we funded a Sea Shepherd vessel to protect dolphins and defend the coasts against illegal fishing practices.

In my book *Echoes from Eden,* I travel to all of these places and provide a first-hand account on the ground of what I am seeing in rainforests, estuaries and oceans around the world. We meet the changemakers in each of the organisations and explore the places they fight so hard to protect. The book begins with my first visit to the Amazon, where I visited Paul Rosolie of Junglekeepers, with whom we protected thousands of acres of old-growth forests. In the last chapter, I return to the Amazon in Brazil with Jane Goodall and we stay with the Xipaya Indigenous people and discover how the local communities and animals are being poisoned by illegal mining in their forests and rivers and how they are fighting to save their way of life.

Dax Dasilva is a global tech leader and environmental activist. In 2019 he published his book *Age of Union* as a compelling guide for igniting today's environmental changemakers. This would later inspire setting up the environmental non-profit Age of Union with a goal of protecting the planet's threatened species and ecosystems. His second book, *Echoes from Eden*, was published by Penguin Random House in April 2025.

Age of Union www.ageofunion.com
The Black Hole Experience www.blackholeexperience.com
The Juma Institute www.institutojuma.org
Jane Goodall's Roots & Shoots UK www.rootsnshoots.org.uk

Artwork by Kelly Heaton
www.kellyheatonstudio.com

Rooted innovation

Martha Dillon interviews environmental justice technologist, writer and educator Joycelyn Longdon

In her expansive new book *Natural Connection,* academic and campaigner Joycelyn Longdon explores six roots of environmental practice: rage, imagination, innovation, theory, healing, and care. Innovation is an area that she has explored more than most in the climate movement.

Longdon is a true polymath: she originally studied astrophysics ("as far disconnected from planet Earth as possible"), at the same time as founding BLACKONBLACK, a studio for Black creatives. Her long-standing interest in environmentalism "bubbled away" in the background, and in 2019 she founded ClimateInColour, a hugely popular online climate education platform and community. Racial justice campaigning, creative media, computational skills and environmental knowledge are all braided across her ongoing PhD and now, *Natural Connection*.

These experiences appear diverse in a western system that siloes fields of expertise. But it is precisely this separation that is the problem, she argues: "It's impossible for me to view technology as something that's disconnected from people in a living world. Technology has physical, material, cultural implications... [Even in] a purely computational project, the tools that we're using are made of materials of the Earth."

Instead, Longdon considers herself a designer and received the London Design Festival's Emerging Talent award in 2022. *Natural Connection* has partly been an effort to start pinning down her approach in words, she tells me. The result is 'rooted innovation', which, she writes, is "a way of looking more closely at the objects and structures around us and embedding them in the greater ecosystems of Nature and culture... [It is] the ability to solve problems in the unlikeliest of places, with the resources available to us." Through this lens, the technological and the natural are indistinguishable, 'recent' knowledge is given priority over ancient, and social justice is paramount.

Longdon isn't interested in capital-T Tech, for Tech's sake. ("It probably took me six months to use ChatGPT for the first time after it came out".) But she is open to new tools and processes, within a wider consideration of natural and traditional knowledge systems. In her PhD, she uses machine learning to interpret results from bio-acoustic sensors, which are placed in a forest in the Ashanti region of Ghana. She works with a group of local people to design the sensor network and its functions.

> "It's impossible for me to view technology as something that's disconnected from people in a living world"

Her willingness to test novel computerised technologies is not shared by all in the environment movement. With ChatGPT and generative AI in the public consciousness, engineered by rapacious companies and unscrupulous billionaires, many rightly focus on the malign applications of modern technologies, their vast ecological footprints and their staggering privacy and surveillance risks. Longdon empathises: "So many of us are becoming disenchanted with, and fearful of, a lot of the technologies that we interact with on a daily basis." But she thinks that perceptions have become too polarised. "There's this idea that technology will either save us or that it will be the source of our demise," she says. "But there's a huge number of

Rooted innovation is "a way of looking more closely at the objects and structures around us and embedding them in the greater ecosystems of Nature and culture"

exciting projects going on in the low-tech space that are using technologies to build sensors from scratch... AI is a [wide] space of analysis techniques."

TECHNOLOGY AND THE FOREST

This is true: the ecological footprint of a sensor, for example, isn't nothing, but is negligible compared to that of an AI chatbot. But can the sensors she uses actually help connect the people she works with to the ecosystems around them? Computers do, after all, usually create a distance between people and the real world. Longdon herself writes of the Vision Pro VR headset: "Apple asks us to be satisfied with a few high-definition videos of Nature as we spend ever more time in their digital universe... [Might this] exasperate our already dwindling meaningful interaction with the rest of the living world?"

Longdon doesn't think that disconnection has to be the case. In her PhD, she asks people what they want to use eco-acoustic technology for. So far, she says, the community she's working with mainly wants to understand the forest better. Many feel disconnected from it – some worry they'll be arrested if they go in at all. (She notes that since colonial administrators demarcated the area as a formal forest reserve, its boundaries have been policed.) They have decided to use the sensors to help identify which birds they are hearing.

Even the process of entering the forest to lay sensors has proved connective: "There are 20 of us together, walking, talking, laughing, running, scrambling, playing, teaching ... we're going to deploy the sensors. But also, we are kind of bonded together around this activity that we're doing." It's a lesson that citizen scientists know well: monitoring pollution, digitising rainfall records and documenting changing landscapes are all digital activities that can be community strengthening, defining and nourishing. Just listening back to recordings doesn't bring us closer to ecosystems, Longdon notes, but "rooted innovation takes understanding that these technologies are situated in locations and can have the goal of being very connected with place."

Longdon feels her project is enabling a deepening, rather than replacing or sanitising, of human experiences of the natural world. But it has also ended up interacting with the forest very differently from conventional Western ecological research. "The most common way that people might use AI in eco-acoustic monitoring is to pick a specific species or a range of species, or to do a kind of baseline survey ... this has been going on for a long time".

This compartmentalisation, or tendency to measure and categorise, is something Longdon thinks comes from a colonial impetus and agenda, not AI tools. In *Natural Connection* she argues that during the Industrial Revolution, western technologists, colonisers and political figures cast Indigenous peoples as 'backward' or 'anti-technological'. Enforced colonial education severed Indigenous communities from their traditional skills and practices. By deploying technologies through a genuinely deliberative approach, she is also seeing much more organic forms of knowledge production emerge.

There's a lot to *Natural Connection*: it's far-reaching, ambitious and deliberately open-ended. But her willingness to see through boundaries is deeply refreshing, whether those separating fields of expertise, between natural and digital technologies, or across the environmental movement. For her, most technology has potential, depending on how and where it is used, and she is one of few people trying to properly investigate what this could look like in ecological spaces.

"Often, as a Black woman and environmentalist living in the West," she writes, "I encounter individuals whose lives have not been touched by environmental disaster or oppression but who have already admitted defeat... Unable to imagine the world outside its current extractive and destructive systems, they are resigned to apathy and inaction." For her, a true natural connection is "to plant strong roots in our communities and within the Earth: to build better futures", whatever the technology.

Martha Dillon is a freelance writer specialising in the climate crisis and its links to cities, technology and housing. She writes regularly for the *The Architectural Review*, *Architects' Journal* and other publications.

Natural Connection: What Indigenous Wisdom & Marginalised People Teach us about Environmental Action by Joycelyn Longdon was published in hardback by Vintage Publishing in April 2025.

"You can choose to belong anywhere … if you choose. It's an act of creation, and like all acts of creation, it is also an act of love, and an enormous leap of faith."

Sharon Blackie, The Enchanted Life

It all starts with seeds …

In this short extract from his new book, seed saver **Adam Alexander** highlights what matters most – whether you have a small vegetable plot in the garden, or you're producing food on a bigger scale

"What do you recommend I grow?"

It's the one question above all others that people ask me. Impossible to answer without knowing something about the poser of the question. My first response is always, "What do you like to eat?" This is as much to tease out what matters to them on both a culinary and a cultural level as to understand the circumstances under which they are planning to breed, grow and consume their beloved crops.

This matters because feeling a connection to our food – its provenance, its place in our own stories and identity, its flavours and uses – becomes the starting point on a journey where we care. I care very much because I feel connected to what I grow and eat.

I believe that the route to a healthier world is to celebrate foods that are local to us, that enhance biodiversity and have natural resilience to pests and diseases: crops that can evolve and cope with the inevitable extremes of a changing climate. All of us who grow vegetables and save seeds are part of the solution, whether we like it or not!

I feel empowered by my association and connection with varieties that matter to me; not only because they benefit me nutritionally and taste great, but because they connect me to a positive journey towards a more sustainable, and healthy, world.

It goes without saying that it all starts with seeds – those that evolve and adapt as we and our world do. Seeds strengthen our connections to what we grow and eat; they are intrinsic to our identity and our future. So the first questions I ask those whose crops I write about are, "Are they delicious?" and "Why are they important to you?" Two things that we might also ask ourselves and that have led me on a journey to discover how many exciting, inspiring and empowering people there are out there; people who offer hope and insights into a future for our world that is rich with flavour and amazing foods: a solution to a carbon-neutral planet by mid-century.

I hope that sharing this journey with me through my book will instil in you the same feelings of hope I have that great things in the field of food production are already making the world a better place for all living things.

Feeling a connection to our food – its provenance, its place in our own stories and identity, its flavours and uses – becomes the starting point on a journey where we care

Adam Alexander is a film-maker, writer and seed saver. This is an extract from his new book, *The Accidental Seed Heroes: Growing a Delicious Food Future for All of Us,* published by Chelsea Green. He is also the author of *The Seed Detective,* a BBC Radio 4 *Food Programme* Book of the Year.

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We must strive to be worthy of trust

Iain McGilchrist's seminal book, *The Master and His Emissary*, explored the different ways the two hemispheres of our brain see and understand the world. Here, he makes the case for the very right-brain quality that could help us find our way out of the 'metacrisis' together – the quality of trust

ARTWORK BY RITHIKA MERCHANT

I believe it is the left hemispheric view of the world, intellectually jejune and morally bankrupt as it is, that has resulted in what has been called the metacrisis: not just the odd crisis here and there, but the despoliation of the natural world; the decline of species on a colossal scale; the destabilisation of the climate; the destruction of the way of life of Indigenous peoples; the fragmentation and polarisation of a once civilised society, with escalating, not diminishing, resentments on all sides; an escalating, not diminishing, gap between rich and poor; and a surge in mental illness.

We do not have the promised increase in happiness, but a proliferation of laws and a rise in crime; the abandonment of civil discourse and, here in the UK, a betrayal of standards in our major institutions – government, the BBC, the police, our hospitals, schools and universities, all once rightly admired all over the world – which have become vastly overweighted with bureaucracy, inflexible and obsessed with enforcement of a worldview that is in flat contradiction to reality. And then we have the looming menace of totalitarian control through AI.

These aspects of the so-called 'metacrisis' have a multitude of proximal causes: economic, political, social, psychological, technological and so on. But beneath and beyond that, each manifests *within* those realms aspects of the left hemisphere's dysfunctional view of the world.

The very thing that *originates* the problem, also militates against *seeing* the problem. Seeing the wider picture – a necessary prelude to understanding – is now increasingly disfavoured, and as a consequence the crises I have referred to are often seen as isolated pieces of bad luck. But they are not: they could have been, and were by some, predicted.

The metacrisis is the predictable outcome of a complete failure to understand what a human being is, what the world is, and what the one has to do with the other. And all this is the sort of thing the right hemisphere is far better able to understand than the left.

The rightful Master, the right hemisphere, has been subjugated by his emissary or servant, the left. In an entirely predictable parallel, we have become enslaved by the machine that should be our servant, as so many have predicted since the time of Goethe: we cannot say we were not warned.

Even physics now teaches us that the mechanical model of the universe is mistaken. But because of our success in making machines, we still imagine that the machine is the best model for understanding everything we come across. We ourselves, our brains and minds, our society, and the living world are now supposed to be explained by the metaphor of the machine. Yet only the tiniest handful of things in the entire known universe are at all like a machine: namely the machines we made in the last few hundred years.

Machines, unlike life, and all complex systems, whether animate or inanimate, are linear and sequential; are put together, part by part, from the ground up; and can be switched on and off at will. Their default status is stasis, not flow; they are not resonantly embroiled with their environment; they have precise boundaries; their parts do not change structure and function as the whole evolves – not least because in a machine the whole does not evolve; and they are utilitarian constructs in service of the power of their maker. None of this applies to life – nor does it to anything else in the universe.

The brilliant mathematician and biophysicist Robert Rosen, in his book *Life Itself*, demonstrates just how unlike machines organisms are. He further argues that the best way to understand all naturally occurring systems – which are never merely complicated, but complex, and therefore never fully predictable – is as organisms, whether we choose to see them as alive or not. And that's before one gets to consider the neglect of our emotional, moral and spiritual nature, which is at the core of being human.

Lyra © Rithika Merchant, 2021
Embroidery hoop with watercolour,
gouache and ink on paper (16.5in x 16.5in)

Summit © Rithika Merchant, 2020
Gouache, watercolour and ink on paper (27.5in x 19.6in)

A MALIGN FANTASY

We seem to have been seduced into thinking we understand everything, and what's more can master it and mould it, like a machine, so as to provide a future that will benefit mankind. That this is a malign fantasy becomes plainer with every passing day. Those with grand schemes to improve humanity have caused misery on an almost unimaginable scale by their narcissism, cruelty and wilful blindness. In psychology there is something called the Dunning-Kruger effect, which tells us that the less people know, the more they think they know. It's hardly rocket science, I admit, but it is worth bearing in mind.

Instead of seeing all things as processes, running organically from the past to the future across time, and spreading out across the world through space, like water finding its way across a landscape, we see ourselves and the world as composed of static slices – here and now – compartmentalised in a way that conforms to the *modus operandi* of the left hemisphere. A world of meaningless bits.

We owe nothing to, and can learn nothing from, history – or so we believe: we owe nothing to, and need leave nothing to, posterity. We turn a blind eye to the inevitable impact of our rapacity on more humble and more stable ways of life that have stood the test of time better than ours. We neglect the importance of context: we believe we are right, and that one size fits all, justifying the imposition of vast global bureaucratic structures, not to say wars, so as to impose our thinking on cultures far different from our own.

Equally we arrogantly critique our ancestors for not sharing the idiosyncratic view of the world we have generated in the last 20 years and which, we believe, must now be forced on all, whatever their reasonable misgivings. And we treat people not as unique living beings but as exemplars of a category.

As we broaden our view, it becomes apparent how much the metacrisis can best be seen as a war on Nature and a war on life. Wisdom, skill, judgement, intuition, and even understanding – all to be gained only from a life well lived – have been sidelined in favour of machine-like algorithms that stifle true thought.

THE SQUANDERING OF TRUST

Truth and trust, words which come from the same root, naturally go together. One cannot have trust in a society where there is no truth; and one cannot be true to a society in which there is no trust. As Confucius told his disciple Tzu-kung, for a stable society a ruler needs three things: weapons, food and trust. If he cannot hold all three, he should forgo weapons first, and food next; for "without trust we cannot stand".

Trust costs nothing but the time to build it, and once built it is a fantastically efficient way for any human enterprise to operate. But it is easy to lose. There is a Dutch proverb: "Trust arrives on foot but departs on horseback." The massive complex of administration and AI do nothing to promote a society of trust, but actively undermine whatever is left of it at every turn.

Being trustworthy is no small thing, and its importance needs to be inculcated at an early age, and then nourished by both individual and society. No one will believe in *us* if we cannot believe in ourselves. We need to start believing in ourselves again – and deserving to be believed in.

> The metacrisis is the predictable outcome of a complete failure to understand what a human being is, what the world is, and what the one has to do with the other. And all this is the sort of thing the right hemisphere is far better able to understand than the left

Once people lose pride in being as good as their word, doing the best job they can, and expecting much of themselves, rules have to be enforced from without, and a penal code substitutes for the moral code it helped to destroy. Mediocrity quickly displaces excellence. Boredom replaces vitality.

Trust has also been lost in the world of schools and universities, hospitals, the police and the army – all of which now have massive recruitment problems, because the perception is that lives of service are no longer respected, or properly rewarded; that the necessary creativity, independence, self-reliance and initiative required by a skilful professional will be stifled; and that the best candidates will not be supported and promoted, because of a patronising agenda based on the ticking of boxes, and militating against excellence.

Like civilisations before us, which drifted further and further to the outlook of the left hemisphere, we would appear to be engaged in committing suicide, intellectual and moral – if not indeed literal; for I fear that the western world may no longer have the will or the skill to defend itself against authoritarian enemies that we cannot just wish away, because in our theory they don't figure.

The three things on which human flourishing and wellbeing most depend are these: belonging to a cohesive social group which one can trust, and with which one can share one's life; closeness to the natural world; and communion with a divine realm, however conceived. This is not just my opinion, but borne out by a vast and ever-increasing body of research. But none of this accords with our current value: power. It is hardly a surprise, then, when we see that material affluence does not make us happy if accompanied by spiritual poverty.

For over two thousand years, in the Platonic, and later the Christian, tradition of western thought, human life was seen as orientated towards three great values:

Sirius © Rithika Merchant, 2021
Embroidery hoop with watercolour,
gouache and ink on paper (16.5in x 16.5in)
All artwork courtesy of Rithika Merchant and TARQ www.tarq.in

goodness, beauty and truth, each of them in turn seen as a manifestation of an aspect of the sacred. During my lifetime, I have seen each of these important values, along with the sacred, repudiated and reviled. A model that favours the machine over the human being, the inanimate over the living, is one that is corrosive of all that is beautiful, good and true. And has no place in it for the sacred.

The early 20th-century philosopher Max Scheler was much concerned with questions of value. When he died in 1928, Heidegger, who gave his funeral oration, described him as the most potent force in the world of philosophy at the time. Scheler thought there was a *hierarchy* of values, with those of pleasure and utility – the values of utilitarianism and the left hemisphere – at the lowest level, and rising by stages to that of the holy or sacred, which he considered the highest: a value which I suggest is incomprehensible to the left hemisphere. In between were, first, the *Lebenswerte*, or values of 'life', such as courage, magnanimity, nobility, loyalty and humility; and then the *geistige Werte*, the values of mind or spirit, such as beauty, goodness and truth – which I suggest are better understood by the right hemisphere.

The left hemisphere's *raison d'être* being power and control, it naturally puts values of utility and hedonism, those of the lowest rank in Scheler's pyramid, first. I may be wrong, but it is my distinct impression that there has been a decline in courage, magnanimity, nobility, loyalty and humility in our society – indeed in all behaviour that carries its costs upfront, rather than concealing its

The three things on which human flourishing and wellbeing most depend are these: belonging to a cohesive social group which one can trust, and with which one can share one's life; closeness to the natural world; and communion with a divine realm, however conceived

sting in the tail. Speaking the truth takes courage, and it would seem that those in our public institutions would rather conform than confront untruth. And along with the loss of courage to speak the truth, there has been an undeniable withdrawal from the beautiful and the sacred. All of this combines to reinforce a loss of sense of purpose and direction; hence the crisis of meaning that it is, by now, a commonplace that we face.

So, what are we to do? I *could* list the bullet points, which along the way would inevitably refer to reforming the education system, to a revival of the humanities, to a serious reduction in bureaucracy, to the cultivation of meditative or spiritual practices, to abstinence from social media, to keeping machines in the background where they can be helpful but away from intercourse with humans, and much more that we all know might help. And it goes without saying that we must tirelessly seek to stop, and where possible reverse, the damage that has been done to Nature – I will not call it the environment, since the term expresses the separation from Nature that is part of the problem. But these will not in themselves heal a matter of *psyche*, of soul. There is no quick fix for such problems, alas.

As a psychiatrist, I would often know, after listening to a patient for an hour or more on their first visit, what it was they needed to do. And when I was inexperienced, I used to tell them. That was a mistake. Until a person truly sees for him- or herself, from the inside, what it is they need to do, they will not do it; and once they do see it, they will not need to be told. The work is to get them to that place.

The good news is that we can begin the healing work, each one of us, today. People say: "But what can I do? The world is so huge and I am so small." And sometimes they add, "and our planet is so small in an incomprehensibly vast universe". But this is to think in the left hemisphere's terms, measuring and quantifying. When the lover says: "My love is as deep as the ocean and as wide as the skies," how large or small *is* that? All the important changes happen from in here, not out there. If we could recover some humility in the face of our ignorance; some compassion in dealing with our fellow human beings; and some sense of awe and wonder before the cosmos, we would be already a long way along our journey.

It has been said that if we could change radically the hearts and minds of only three per cent of people, we would be able to make the changes we need to see in the world around us. So my recommendations might be quite simple. Begin by cultivating a sense of awe and wonder, rather than clever knowingness, towards the extraordinarily complex and beautiful cosmos, that it is a pure gift that we have been given a life in; think about what we are to do with it; and in order to do that well, have compassion for others and for all the living world, not a sense of aggressive embattlement against forces that we quite probably misunderstand; and begin to cultivate a sense of the little that we can know – not willing ignorance, but the beginnings of true knowing, which is when we realise how little we know.

For this we need to understand ourselves anew. *Gnothi seauton*: know thyself. We need every insight we can get into what we are doing to ourselves, to life itself, and to our inexpressibly beautiful and complex world. I hope I may have here offered one such insight, however small. The work is great, but we are capable of greater things than we know.

Iain McGilchrist is a former Fellow of All Souls College, Oxford, a Fellow of the Royal College of Psychiatrists, a Fellow of the Royal Society of Arts, and former Consultant Psychiatrist and Clinical Director at the Bethlem Royal & Maudsley Hospital, London. He is the author of *The Master and his Emissary: The Divided Brain and the Making of the Western World* (Yale University Press) and *The Matter with Things: Our Brains, Our Delusions, and the Unmaking of the World* (Perspectiva Press).

In September Iain will be teaching, with Satish Kumar, a five-day course for Schumacher Wild called Balancing the Brain. Details here:
www.schumacherwild.org/schumacher-foundation-course-1

Project Pollinators

This artwork is from a collaboration between two India-based artists, Nayan and Venus Bird, who work together under the name The Paper Ark to create miniature paper sculptures that aim to celebrate biodiversity and highlight not only the importance of pollinators, but of every creature – large and small – to the balance of an ecosystem.

Our special theme, and the pages that follow, highlight some of the unexpected pollinators worldwide: bats, mice, lizards, slugs, snails, fish, beetles, spiders, frogs, crabs, ants, moths, cockroaches, woodlice, tortoises, snakes, earwigs, wind, water and... humans.

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www.thepaperark.com

Brown Throated Sunbird, watercolour painted miniature relief sculpture made of layered paper (9cm x 9cm) by Nayan and Venus (The PaperArk) www.thepaperark.com

Bees: A Guide for the Curious

Susan Clark introduces the first of her new Nature guides, and shares how a rural childhood – especially spending time with a drystone wall and all its residents – marked the start of a lifetime of joyful entanglement with the natural world

I remember the wall so clearly. Well, my damp and moss-covered allocated foot-and-a-half of it. It served as a boundary wall between the imposing red brick Victorian vicarage in the centre of the tiny North Devon village where I went to primary school, and the pavement alongside the old A361, which was the main single-file arterial route to the Atlantic coast.

Our school – two classes, maximum 30 kids in total, most of them related in some way – was on the opposite side as you left the village and was the domain of a married couple who took charge of one class each. Mr Holmes had the older kids and Mrs Holmes, the 'tackers'.

Project Wall was the brainwave of Mr Holmes, who had the air of an old warhorse and who was endlessly creative and inventive in keeping his lively class busy. First, we were each assigned our own portion of the wall to study in as much detail as we could. We had new notebooks and pencils and a magnifying glass – one shared between a dozen – and, every day, we marched out in shifts to spend time with the wall, exploring anything that grew, lived or moved between the cracks and over the old stones, especially those things that scurried away.

Insects, spiders, woodlice, lichen, ferns, wasps, millipedes, solitary bees, liverworts and even the odd plucky flower managing to hang on in the nutrient-poor and crumbling soil between the cracks and crevices. If we were lucky, a toad or a mouse! It was nothing short of magical.

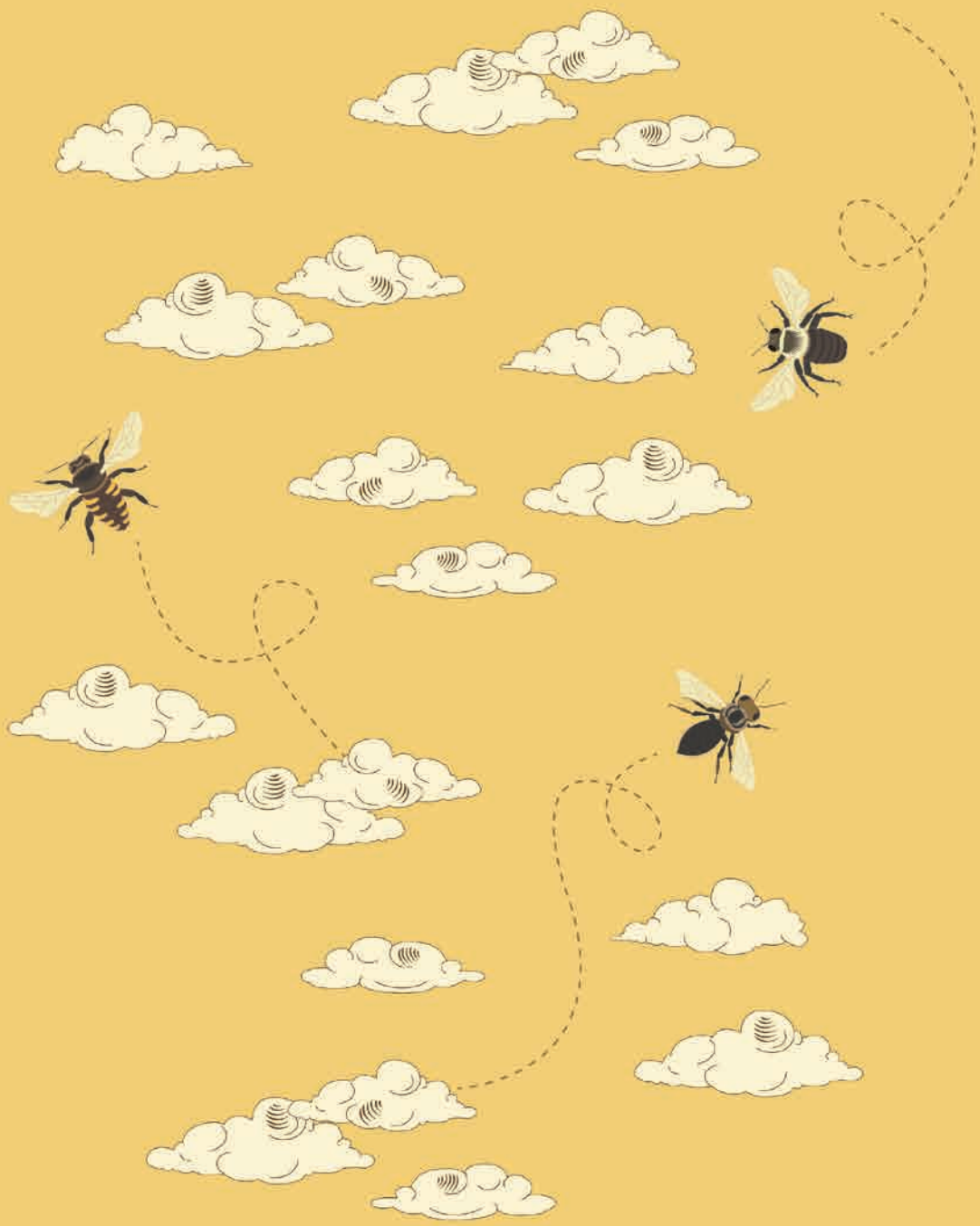
For me, an entanglement with the natural world is not about seeking the thrills and spills of a remote wilderness experience or telling you what you should think and feel when you spend time outdoors. It is about celebrating the extraordinary that we may think of as mundane but, thanks to my wall, I know is not the case.

Bees: A Guide for the Curious is the first in a brand new series of Nature books being published this year, with guides for clouds, mushrooms and constellations all out before the end of 2025. Working on these wonderful books has been a joy and nothing short of enchanting.

The word 'Curious' comes from the Latin '*Cura*' (or *Curae*) meaning 'to care' and that's what this new series of Nature books is all about. Caring. From bees to clouds and mushrooms to constellations, each time I dive into a new topic I remember how much we all need to care – and then I am right back with my notebook and the wall. If only we could give all kids this kind of introduction to the natural world. We wouldn't have to ask people to care about protecting the planet.

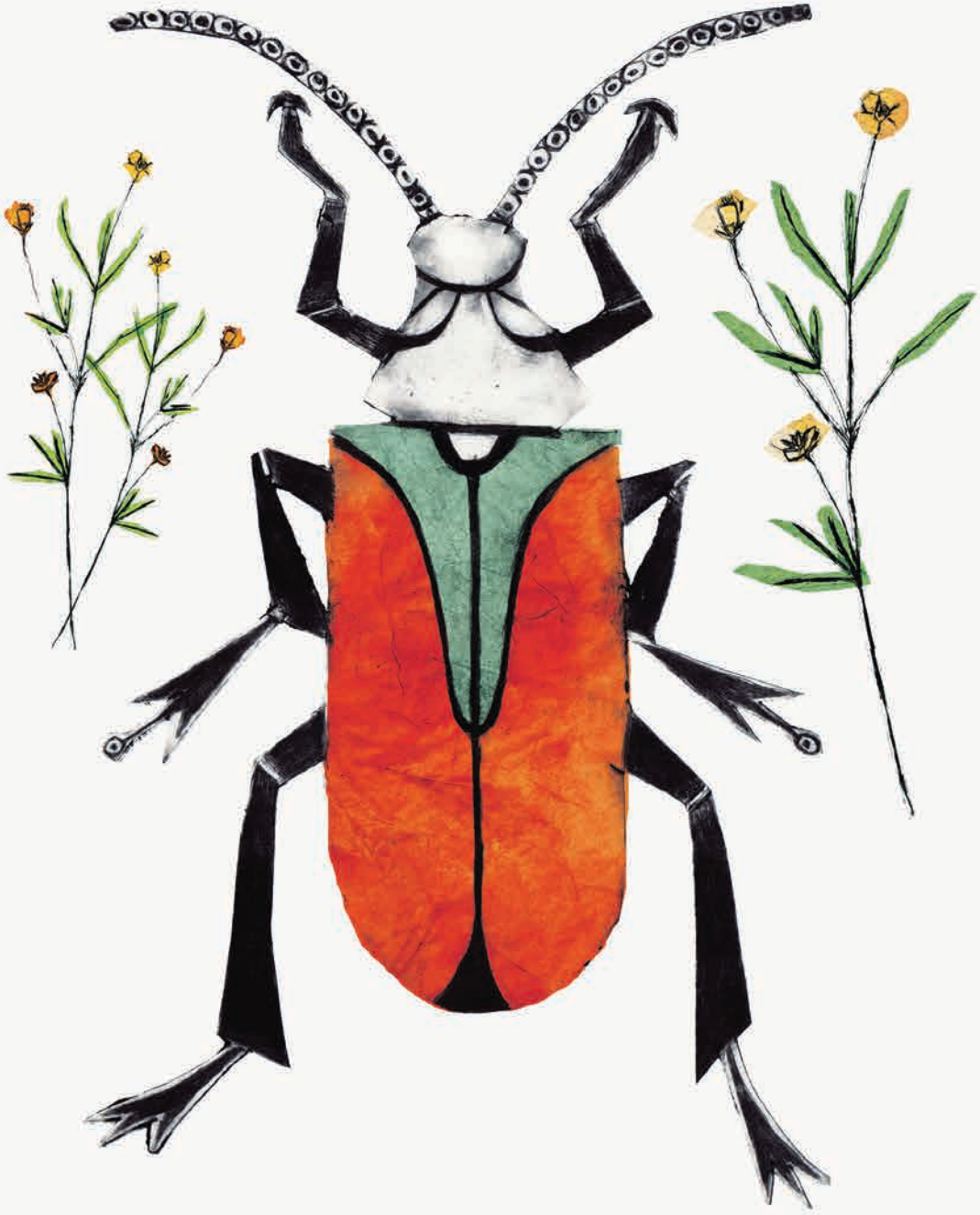
Susan Clark is the editor of *Resurgence & Ecologist* magazine and the author of multiple non-fiction books. She hosts a new weekly online Curious Writers Circle, with a focus on writing with the natural world.
www.linkedin.com/in/susan-clark-944062148
Bees: A Guide for the Curious by Susan E. Clark is published by Quadrille.

Dreaming bees from *Bees: A Guide for the Curious* by Susan E. Clark



Introducing… the Beetle Lady

Our writer **Katie Dancey-Downs** learns how a fear of bugs turned into a passion and respect for them when she speaks to best-selling children's author M.G. Leonard



Scarlet Malachite beetle by Beatrice Forshall
www.beatriceforshall.com

Resurgence is on a video call with a rainbow stag beetle, held up to the camera by the best-selling children's author M.G. Leonard. Almost the size of her hand, the beetle is an iridescent swirl of colours. There are hundreds more beetles in Leonard's home, although, admittedly, at the time of year when we talk – early January – these are only the carcasses of beetles past.

Leonard tells me many beetles live for only a few months in their beetle form, and that the winter months are simply too cold for them to survive. But in the warmer months, they scuttle around tanks in her UK home. One beetle, Betsy, loved to fly around the room, flapping her wings wildly. Buckets of oak mulch and soil are dotted around the house and it is from these that the larvae wriggle and eventually metamorphose into an array of bright and colourful beetles.

If you had told Leonard 20 years ago that she would become known as the Beetle Lady, she might have run away screaming. Throughout her life, she suffered from a phobia of bugs, until she underwent a metamorphosis of her own. "I just thought that my phobia was a fact. If you'd asked me to describe myself, I'd be like, 'Oh, my favourite colour is green. I'm scared of all bugs,'" she says. But thanks to her discovery of the joys of gardening, especially for our mental health, all this changed.

After suffering from a bout of depression, a friend recommended Leonard plant some lavender. This was the start of her journey into gardening, and, thanks to this new interest, she had to confront her fear of pollinators. From taking an online course with Alan Titchmarsh and being an avid follower of Monty Don, she knew about the damaging impact of pesticides and did not want to use them. "I found myself in this weird position where I was terrified of the creatures, but wanted them to live," she said.

And then, when she had her first child, she saw him mimicking her negative reaction to a housefly buzzing around her home and realised she did not want to pass on that fear to her son. Instead, Leonard searched for positive stories about insects to read to him and then had another big realisation.

As a child who was a voracious reader, she had only ever seen bugs represented as something to fear – scurrying spiders a sign of the evil villain's arrival, swarming flies a signifier of death or disease. Factual books were fine, but fiction had a big bug problem.

"I consumed narrative after narrative that told me, that warned me, that bugs were bad," she said.

EARLY POLLINATORS

Leonard thought about what would be "the least-frightening" insect for her and alighted on the beetle. At that point, she thought this was a singular creature, brown with six legs, that crawled around under rocks. But after digging a little deeper, her mindset shifted and she began to find herself fascinated by beetles, learning everything she could about them.

Coleoptera, or beetles and weevils, is the largest order of insects. They have sheathed wings, and there are over 400,000 different species across the planet. They account for around a quarter of all animal species, and they are vital for our ecosystems. Beyond being so numerous, beetles are also thought to have been the first ever pollinators in the evolution of our planet – although not all beetles are pollinators.

Factual books were fine, but fiction had a big bug problem

The discovery of an ancient beetle encased in amber and covered in pollen across its thorax, abdomen and legs suggests the beetle may have been among the first insects to pollinate flowers. (See page 34.) Its body was similar to modern-day beetles, designed in a way to help it transport pollen. The specimen dated back to 99 million years ago, in the Cretaceous period, a time when Tyrannosaurus roamed the Earth, and when flowers are thought to have first evolved.

This was the earliest evidence of insect pollination, although, when an earwig-like insect (not a beetle) from 280 million years ago was discovered in Russia in 2023, the beetle's accolade was tested. The earwig-like insects' pollinating powers are yet to be confirmed, though, and the pollen found on them comes from non-flowering plants.

"I thought, someone needs to be writing stories that really demonstrate the awesomeness and the importance and the brilliance of insects. But I didn't think it could be me, because I was still running away from butterflies," Leonard admits.

But, despite her fears, she knew that no one else cared about this topic in the way she did, and she made a decision to 're-bug' children's literature. She knew she would need to write a factually accurate story that was so compelling children would have to read on, even if they were

Darwinylus marcosi beetle

Illustration of a *Darwinylus marcosi* beetle covered in pollen grains (yellow). In 2016, a specimen of this beetle was found preserved in 105-million-year-old amber in Northern Spain. At this time, in the mid-Mesozoic, there were very few flowering plants (angiosperms), so this pollen would have belonged to a gymnosperm (seed-producing) plant. *D. marcosi* would have fed on the pollen, chewing the grains with its mandibles (jaws), demonstrating for the first time a fourth major insect pollination mode. This was a mutualistic relationship, with the beetle receiving nutrients and the plant being pollinated.

scared of bugs. Beetles would be the perfect route in, and so she wrote her first book, *Beetle Boy*.

Before long, Leonard was invited onto the BBC children's television show *Blue Peter* for Insect Week, where they wanted her to actually hold the beetles that were being brought into the studio by a man with tanks of bugs. By this point, she might have become a beetle champion, but she had still never actually held one, and so had yet to address the physical side of her phobia. She visited her friend Sarah Beynon, founding director of The Bug Farm, who gave her some sun beetles to hold. The next thing she knew, she was having her photo taken with rainbow stag beetles.

"That was all good," she says, "but then a couple of days passed and my confidence started to slip. So I rang Sarah and said, 'I think I need to have my own beetles'."

A pair of rainbow stag beetles arrived in the post – a shock for the postman – and so the author's beetle-rearing days began. By the time she appeared on *Blue Peter,* she couldn't wait to see the rhinoceros beetle that she would be able to hold, and which is the star of her *Beetle Boy* book.

"Now I'm known as the Beetle Lady," she says, laughing.

When she's not writing or beetle-rearing, Leonard tours the country extolling the virtues of beetles, telling kids how important they are for the environment. And she is now a vice president of Buglife, an organisation dedicated to the conservation of invertebrates.

"I campaign as vehemently as I can for the preservation of habitat for our insects, because they are so fundamental. Without them, everything else is screwed," she says. "There are some plants that are purely pollinated by beetles and only beetles." The magnolia tree in her garden, for starters.

She's quick, too, to point out that some do other important jobs beyond pollination: the longhorn, for example, which breaks down wood, or sexton, which buries small carcasses. "If it weren't for dung beetles, we literally would be wading around in animal excrement," she says. "In dragging their little balls of dung into the soil, they enrich and bring all of that muck into the soil, fertilising the roots of a plant system."

Leonard's latest children's story is called *Hunt for the Golden Scarab* and explores why dung beetles were considered sacred in Ancient Egypt. But if she were to choose another beetle to receive sacred status, she would choose the sexton beetle, perhaps inspired by her research into mummification. "I think the sexton beetle needs some worshipping," she suggests.

Apart from the fact that its markings look a little like the Gotham City Bat-Signal, it has an incredible, and gruesome, burial process, which includes laying its eggs next to the carcass of a dead animal that it has first buried underground, and which it then strips and preserves. When the larvae hatch, they're starving, and need a lot of energy for metamorphosis. Mother beetle is waiting with a feast.

"Once the larvae have hatched, the sexton beetle sings a little song so that the family of larvae, in a kind of single file, all make their way towards the food source. They follow, Pied Piper-style, the music of the sexton beetle."

It's rare, she tells me, that an insect will stick around to feed its young, and so this is why she thinks this behaviour makes the sexton beetle worth worshipping.

By now, the author, who was once terrified of all insects, has transformed herself into the Beetle Lady. She has come to understand that a phobia is not a fact of life, and in doing so, has discovered the joy of getting close to one of the planet's great pollinators. Nature has been healing for her, and she hopes that she, in turn, can encourage children to discover and cherish a more positive relationship with insects.

M.G. Leonard's novel *Hunt for the Golden Scarab* was published in paperback earlier this year and is available from all good bookshops at £7.99.

Katie Dancey-Downs is a freelance journalist who writes about human rights, the planet and culture. She is also assistant editor at *Index on Censorship* magazine.

Problems of success

"I create paintings using pollen-based paints that examine how modern farming practices transform diverse ecosystems into monocultures. Pollen deposits in soil provide a historical record of the damaging impact on diverse ecosystems such as rainforests, grasslands and rural habitats as they are converted into single-crop agricultural lands. Using pollen as both medium and metaphor, I invite viewers to consider how human innovation impacts natural systems, and the true cost of agricultural advancement."

Untitled (Pivot Irrigation), pollen painting by Freddie Yauner

Freddie Yauner www.freddieyauner.co.uk

In the breath of a bee

Anisha Jaya Minocha shares a bee-related and personal exploration of sound, scripture, and a deeply felt message about our living connection with creation

In cosmologies across cultures, the world begins with a sound. In Hindu thought, it is this resonance of 'aum' which spills into the pulse of creation. Trembling deeply into the threads of life around and within us. A sound carried through the invisible lightness of breath.

Pranayama, the exercising of breath in the practice of yoga, focuses attention towards this unseen life force which sustains us. One of these is *bhramari pranayama*, or bee breath. In holding thumbs over the ears, the vibrations of a humming sound are created. These are directed towards the top of the brain, the cranium, where the seventh chakra is located. This breathwork replicates the rhythmic movement of the thorax which produces the bee's beating wings.

Overlooking Goan paddy fields, coloured by the chirpings of tropical birds and spots of all sorts of winged creatures, I practise this breath for the first time. My lips start softly vibrating, and a resonance much deeper and more sustained than default breathing emerges. This vibration clears external sight and sound with one continuous hum. Everything else, from the grazing peacocks to the busy dragonfly, fades away.

After three different tones and trials of 'buzzing', I open my senses to the outer world. The paddy fields are, of course, still there. The green strings sinking comfortably into their mud. They seem, though, somewhat calmer than before. The bee breath casts a net of intangible connection to the body, expanding a more subtle connection to the outside world. It is this humming breath that gives the sensation of being underwater, revealing the immediacy of both body and breath. In the aftermath of the bee breath, the sounds which sustain the universe seem more united, carrying an ease both within and beyond my body. A vibration moving as pollen does through plants.

Each *pranayama* has nuanced effects; the deep vibrations of the bee breath differing, for example, from chanting 'aum', whereby the body seems to resound into its surroundings like the base of a singing bowl. However, attention to any of these breathing practices acts as a foundational force of life which has been practised for centuries. One which lies unseen and invisible.

If it is sound – whether a hum, a vibration or a buzz – which has created this Earth, then it is sound which connects us to creation. Which brings us to a deeper attention. A microscopic force, as potent as it is small, towards that which is less visible. The way of the breath allows a way of noticing how life is not only formed, but continues. In the small movements and music in the beating of bee wings. Through *pranayama*, or breathwork, we are moved beyond sight and into sound. Through this practice, we need not see, but only feel.

In the aftermath of the bee breath, the sounds which sustain the universe seem more united, carrying an ease both within and beyond my body. A vibration moving as pollen does through plants.

Breathwork reverberates through noticing this subtle essence, where sound reveals the oneness in all. The practice of *pranayama* carries the core concept of nondualism, which was established in Advaita Vedanta, a classical school of Indian thought. According to this Vedic philosophy, the Self, Truth and *Brahman* (the ultimate reality) are all of the same essence. This can be glimpsed in a few seconds of attentive breathing, like replicating the beating thorax of a bee. Spinning in cycles, breath reaches into the underlining fabric of life, streaming out to touch all of existence. And so the web is strung out further, like the invisible spinning of a spider stretching further and further.

As a connector, as well as a singular point of focus, breath carries within it the fluid dynamism of conversation. The chatter between the bluebell and the bee. Or, as the Upanishads were formed, through a dialogue between teacher and student. These ancient Sanskrit texts, going back to around the 6th

Bee 27 (Drone Comb), 2011 by Rebecca Clark
Graphite and watercolour on paper (18in x 15in)
www.rebeccaclarkart.com

century BCE, encapsulate the core of Indian philosophy, and are known not only for their insight into consciousness and the nature of reality, but also for the rich oral culture of their origin, promoting the shared exchange of knowledge. In these texts, understanding truth not only follows rigorous scriptural understanding, but involves lived interconnection with the wider world. The sound of conversation flourishes through a merging, a pollinating.

The *Chandogya Upanishad* tells the story of Shvetaketu, who returns from the forest after 12 years of studying the Vedas, and learns from his father what cannot be solely taught from the intellect. This connection to the Earth is vividly recalled through a sense of unity. A truth which lies beyond both words and scripture, buried within an attention to the intrinsic nature of creation:

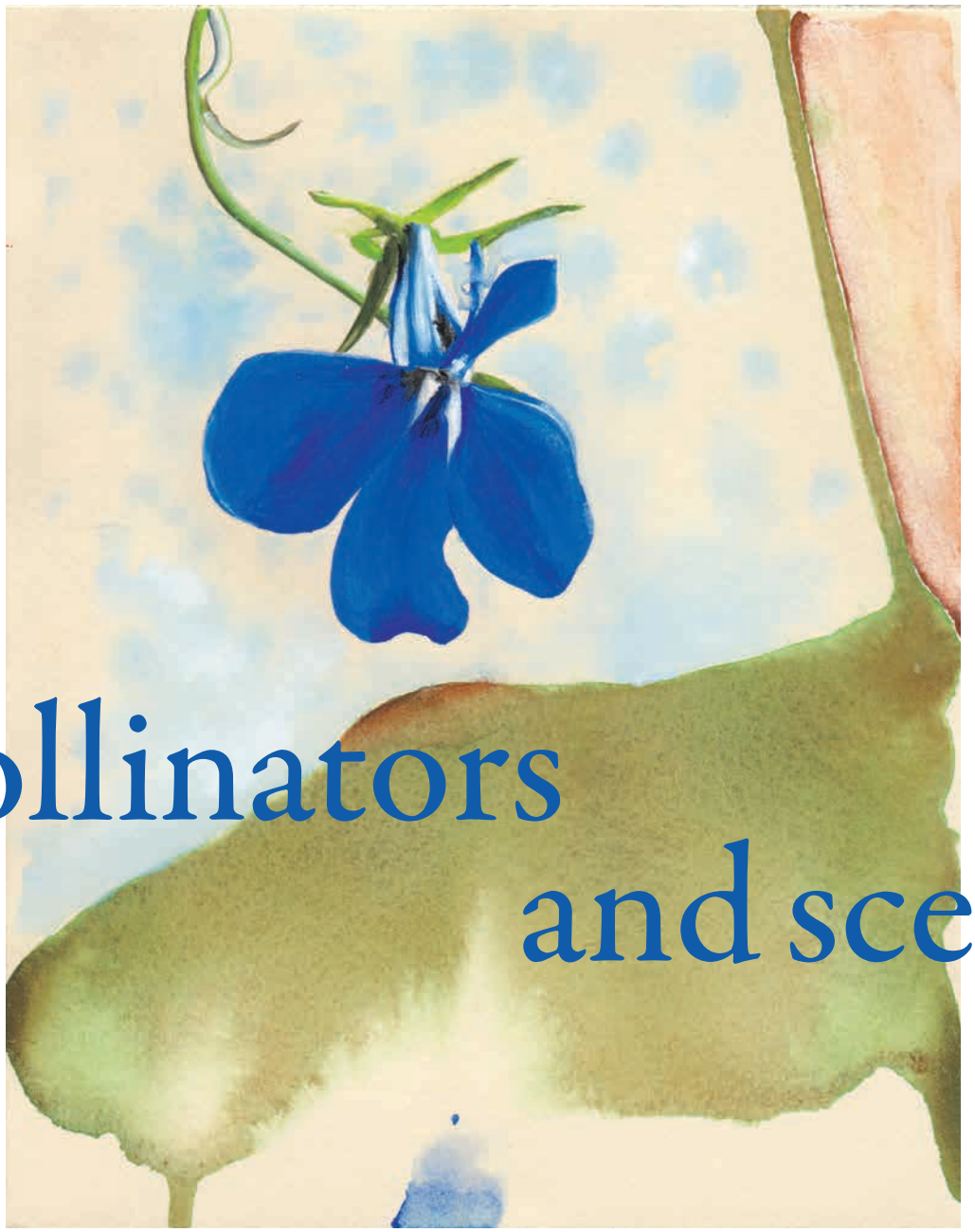
"As bees suck nectar from many a flower and make their honey one, so that no drop can say 'I am from this flower or that'".

It is this colourful analogy which illuminates many messages within Vedic philosophy. One such message is the illusion of separation, as revealed through the symbiotic process of pollination. Here the verse expands singularity to take the multitude of the natural world into account; its abundance of flowers condensing into the sweetness of a 'drop'. Just as breath and sound work their way through the world, this simile reveals what is not immediately visible. Though honey is seen as honey, it is interlaced in its dependency on pollinators and the pollinated. All flowers merge into a stream of oneness.

The father continues fleshing out this metaphor, where "all creatures, though one, know not they are that One." He draws attention to the truth that lies beyond, beneath and around our immediate eyeline. The subtle essence. The small sounds. A reality which weaves itself into an innate connection to the breath, just as the practice of *pranayama* carries a connection to the Self and our surroundings.

What the Upanishads call the 'hum of the Earth', the sound of the 'aum', and beginning of all creation, is bound by breath. What happens when we listen to the root of all invisible things, to what drives the propelling of bee wings? R

Anisha Jaya Minocha is a writer based in Manchester and St Andrews. She co-edits *SINK* magazine, facilitates creative workshops, and has performed at Peace Symposium London with The Poetry Society. Her project Roots, developed with Green & Away as writer-in-residence, explores the intersections of ecology and Indian philosophy.



Painting by Lisa Adams
www.lisamakesart.com

Pollinators and scent

It's not just the bees who communicate with, and respond to, scent to tell each other about their environment. Humans, too, are far more sensitive to smell than we may think, and are picking up clues from the environment all the time, says perfumer and pollinator **Simon Constantine**

When it comes to human evolution, the human sense of smell is unfairly labelled as being the lesser of our senses and, over the years, there's been plenty of propaganda from the dog and cat people who maintain the human olfactory sense is far inferior to that of other mammals. As a perfumer, I don't think that's fair.

The fact that our noses aren't a foot off the floor means that as human 'smellers', we inevitably lose a certain degree of sensitivity as a result of distance alone. However, I would like to make a case for the fact that our sense of smell – and the role of scent in our lives – is a true gift, and one we shouldn't cast aside without a thought.

The last few post-pandemic years have, of course,

presented a disproportionate threat to our sense of smell as, each winter, Covid-19 rates ramp up. The danger of losing our sense of smell indefinitely, or having it indelibly altered due to the changes and challenges of the various strains, meant something we long took for granted felt more threatened. And so, in some way, I hope we can now take a moment to appreciate it a little more and to redress our relationship with scent.

As perfumers, some of us spend a lot of time talking about how we might harness a particular scent and put various magical elixirs through multiple alchemical processes to create a wonder of fragrance that you may or may not like. It may be that already today you noticed the smell of floor cleaner or liquid detergent (perhaps the largest body of perfumery work in the world) and, of course, vast resources, including time, are literally poured into creating these fragrances.

Outside the obvious everyday and domestic scents, we may be less aware that in urban environments we are increasingly deliberately assaulted by fragrance – from the artificial smell of baked bread in the supermarket (a proven sales technique) to the bespoke scent of your favourite hotel, all are being used to alter your mood and create subconscious associations, often without you being aware that this is happening at all.

And here we begin to see the true power of scent.

I happen to be very keen on the natural world and, in 2019, I found a forgotten walled garden in Dorset. Here I have dabbled with, and then immersed myself in, scented Nature. It began in the obvious places: the roses, jasmines, citrus blossoms or scented pelargoniums that are just so delicious to have around the garden. These soon helped me connect to scent in Nature. But I also started to question why these plants, and so many others, are scented, and what that might mean both to us (humans) and the wider natural world.

I stumbled on tantalising titbits of information that allowed a glimpse at the larger picture of scent. For instance, in the pre-industrial age (before sulphur particles were so readily available in the atmosphere) the aromatic terpenes released by certain trees played a role in cloud seeding and the hydrological cycle. If we think of conifers or eucalyptus – trees with recognisable, aromatic rich essential oils – they often produce more of these essential oils in heat stress, almost as if their response to drought is to release a scent that helps seed clouds with the hope of rain. A very real geo-engineering feat built into many scented tree species.

As we added beehives to our walled garden, I discussed with beekeeper Mike how the very spot from where he had just collected the many swarms of bees would continue to attract bees for several days after the queen and swarm had been rehomed in a hive. Mike said that at the peak of the swarm, a citrus scent would waft around the buzzing bundle of bees as they clung to one another, protecting the queen and searching for a new home.

This scent is an aromatic chemical called geraniol, which is present in lemongrass and in many other floral oils, such as rose. As they forage for nectar and pollen, bees are able to extract the geraniol element from the whole essential oil and use it to scent their trails. This material will then indicate where the bees should congregate. (Maybe the amateur beekeepers among you have already baited empty hives with lemongrass essential oil specifically to attract a passing swarm, tempting the bees into the hive.)

I have dabbled with, and then immersed myself in, scented Nature

Now let's delve into the soil. The smell here is such a part of Nature that we may not even question it, but sometimes, and especially after a rainfall, people may notice and appreciate the welcome fragrance of petrichor. This is another aroma chemical called geosmin, also recognisable as the smell of damp. I like this as an excellent example of how sensitive our noses still are, because humans can detect 15 parts per trillion of geosmin in the air, which is why when you check out an apartment that smells of damp you can sense it very easily.

In evolutionary terms, I could theorise that the ability to smell both water and dampness would be very helpful in regions with scarce access. Of course, the geosmin isn't lying about the place for no reason or solely for our benefit, but is produced by *Streptomyces* bacteria hidden in the soil that kick into gear as soon as the water arrives, and after a long spell of dry weather this can be quite a dramatic scent change.

This small window into the role of scent in Nature begins to show us a world that, like many others, is only hidden because of our lack of awareness. If we started to attune to scent, just as we would with our hearing and sight, we would quickly realise how rich our natural world is and would better appreciate the gentle weaving together of fragrance all around us.

Maybe we can start with those smells we love, and then also begin to find a place of fascination for the role of other less attractive smells – the sulphurous notes of a stinkhorn fungus fruiting in the woods, or a pile of rotting seaweed seeping dimethyl sulphide into the air. Either way, in a time when our sense of smell has been threatened, it feels right to be thankful for the gift of scent, wherever and however we find it.

Simon Constantine is founder of Careys Secret Garden and co-founder of ånd fragrance. As a perfumer, he uses his fragrances from ånd fragrance to highlight and support communities around the world who protect their ecosystems. Simon has been restoring Careys Secret Garden, a Victorian walled garden in Dorset, since 2019. His unique approach to gardens and fragrance comes through a regenerative lens and grassroots ethos, which blends tradition with modern issues ranging from rewilding to social justice. Simon is a trustee for the Sumatran Orangutan Society and is a permaculturalist.

Sunflower Borders by Anna Perlin
www.annaperlin.com

Acknowledging abundance

In this extract from her best-selling book *Evergreen*, fashion influencer **Lydia Millen** shares her love of Nature and how lessons from the natural world, like a trust in abundance, support her own personal development

"Silence emails and the voice of doubt within. Go barefoot, ground your feet, feel the earth beneath your toes"

As tomatoes blush in the greenhouse and berries ripen, seeds that were sown in spring manifest in summer. Bees work in harmony, scattering pollen far and wide. And with more daylight than at any other time of the year, the sun invites us to seize every moment. To lean into the light, enjoy the fruits of our labour and celebrate the fertility of the earth.

Of all the sights to behold in summer, seeing wild flowers in full bloom is one that I cherish more than most. Why? Because it never ceases to remind me of the joy that can be found in this world... if we choose to see it.

From frothy cow parsley, delicate daisies and dramatic foxgloves standing to attention in the garden, to pastel-coloured forget-me-nots, scarlet poppies and buttercups swaying in the breeze. To some, they are weeds weighing the garden beds down. To others, they are the stars of the English summer meadow, which attract wildlife and bring an abundance of colour, butterflies and bees our way...

That's why when I think about summer, I think about our potential. I'm reminded that the more we give to the universe, the more we are likely to get back. And – given the endless signs of abundance on offer in Nature – I'm comforted by the idea that this world has more than enough opportunity to go around.

I'll be the first to admit that opening myself up to abundance in my day-to-day life didn't happen overnight. It certainly didn't always feel easy to access, either. There have been times in my life where – consciously or not – I've reverted to feeling like the victim because it seemed like the safest thing to do.

In the early days of my career when I'd see other people get offered my 'dream' job, when I first started house hunting and my 'dream' home fell through, and when I was younger and feared I'd never find my 'dream' partner, my disappointment often felt like a self-fulfilling prophecy. I would assume something was about to go badly, and lo and behold it would; then I would use that as evidence that things never work out for me. It was a mindset that I can now recognise as a 'scarcity mindset' – the belief that there are limited resources available, so if someone else has or experiences something, it means that there will be less for you to have or experience.

Thankfully, though, when the consistent hard work that I'd always dedicated to my career started paying off, my mindset started to shift. Without knowing that it was called an 'abundance mindset' at the time, I realised that I was starting to focus more on what was going well for me, as opposed to dwelling on what wasn't. *A choice that brought so much positivity into my day-to-day life almost instantly. So much so that I went on to apply this approach to every aspect of my existence for that reason.*

The more I put myself out there, said 'yes' to opportunities and paid attention to what was working, the more opportunities came my way. Instead of seeing other people's joy and success as a threat, I came to see this as evidence that both were real and there was certainly enough to go around. And when I started to get really clear on my goals and values, shared them with the world and actively started working towards them each day, dream projects (like *Evergreen*!) and opportunities felt easier to come by. So, too, did feelings of contentment and genuine gratitude.

As someone who gets excited by visual things, I often find myself with a pen and journal in hand these days, writing down my ambitions and dreams so that I can see them laid out before me, too. Taking the time to visualise them on paper makes them seem more real and feels like striking a silent deal with myself – I now have no choice but to make them a reality. Perhaps it's because they're no longer fleeting thoughts in my head, but real goals that have now been committed to in ink! Consciously visualising my dreams and actively reminding myself that they can materialise on a daily basis (if I commit to them) plays a crucial role in how I navigate my life today.

It's here that I feel the need to pause for some clarification, as the practice of manifestation is often misunderstood. To be clear, success, joy and dream opportunities don't just pop up overnight for me because I decided to think them into existence one day. Rather, with the help of some brilliant podcasts and self-help books (I highly recommend Mo Gawdat's book *Solve for Happy* as a brilliant starting point), I made the choice to change my perspective – a choice that is available to us all – and started to see life as a series of opportunities and lessons that were mine for the taking. That mindset has had a knock-on effect on how I show up in this world and how I choose to approach and spend my days. And, eventually, my positive mindset has led to positive actions which have yielded positive results.

If you are struggling to find the opportunities and happiness that are out there waiting for you, please remind yourself that abundance is not something that people acquire. Abundance is something that people choose to engage with through the power of their thoughts. Should you choose to engage with it, too, something tells me that it will be ready and waiting to embrace you with open arms.

Digital creator Lydia Millen is one of the UK's top influencers in the luxury space, with a global following in excess of three million. She has worked with major brands including Jo Malone and Karen Millen (no relation), but she is also a supporter of not-for-profits including Battersea Dogs & Cats Home, The King's Foundation and The King's Trust. Lydia is married to Ali Gordon. They have two dogs, Porter and Berkeley and a cat, Lumi.

Evergreen, which introduces her followers to the importance of the natural world in her life, is Lydia's first book. It is published by Orion and available from all good bookstores.

Dahlias and Sunflowers by Anna Perlin

"The dictionary defines an environmentalist as 'a person who seeks to improve the quality of the natural environment and to protect it from harmful human activity'. That's you, that's me. That's all the sane ones who live on this Earth."

Isabel Losada, from The Joyful Environmentalist

Defining and renovating our forests

Conservation scientist and author **Lauren E. Oakes** explores the history of our forests and discusses what their vital role in our future could look like

People often perceive forestry as growing forests for timber. In my research, I'd noticed that the big native woodland-creation projects rarely attract the media attention that plantations do. Yet these efforts offer more benefits to water quality and biodiversity than a forest of Sitka spruce might deliver. One cold March morning, James Hand, Operations Manager for Forestry and Land Scotland, picked me up from Stirling. We drove through the steady rain to visit Loch Katrine in The Great Trossachs Forest, the site of one of the earliest forest restoration projects in Scotland that had certified the carbon it would store.

The air felt soupy as we stepped out of the truck. We traipsed through old grazing fields to clusters of young trees. Their dark green colour contrasted with the muted grey sky. I stared at the native rowan and Scots pine, a species that also has a relatively high capacity to absorb carbon dioxide. I knew the experts involved had estimated how those trees would grow and how much carbon they might sequester in the years ahead. At some point, a company would likely claim that carbon as emissions removed from our atmosphere. A fast-growing plantation may suck up carbon faster and deliver much-needed timber, reducing the pressure to import from elsewhere. But a monoculture forest is also very different from what once was.

Most dictionary definitions of restoration centre on returning someone or something to a former condition. The effort to plant 2.5 million trees in the first 10 years of this 200-year project in The Great Trossachs was, indeed, returning trees to a land forested long ago. Creating a forest where one hasn't stood in living memory, however, competes with perceptions of what the land and its uses should be. Even if I close my eyes and imagine a quintessential view of Scotland or England, I see rolling hills and open land, gnarled oak trees and grazing sheep. I understand how altering the current norm may also spark resistance.

Bringing back trees changes how people relate to the land and to each other. Yet we live in a world with about half as many trees as there were before civilisation arose. I admit that I want more – and not only for the carbon they sequester.

I want more trees for the shade they offer in this warming world. Trees cool the air around them. I want more trees for my children. They improve air quality. They calm our minds. Studies show correlations between tree cover around schools and academic performance. Trees help retain soil moisture and stabilise water tables. They can reduce the risk of drought and other extreme events. Studies have also revealed inverse relationships between the amount of tree cover and risk for cardiovascular disease, as well as depression. I want more trees for their great potential to make this planet more habitable into the future. But what we're losing in the persistent degradation of relatively intact forests, in places like the Amazon or the Congo Basin, is different from the trees and forests we're gaining.

Our perceptions of what a forest is, or could be, shape what we aim to protect and create

I first heard the term 'forest transition' when I was in graduate school. It's the shift from forest loss to gain – when deforestation disappears, and reforestation commences. I came across the work of Alexander Mather, a Scottish geographer, who spent his career studying what drives these historical green reversals. For thousands of years, Scotland had been mostly forested. By roughly 1600, only around 4% or 5% of land retained those ancient woodlands. It remained that way for a couple of hundred years. By the early 21st century, however, Scotland's forested area had risen to about 17%. Yet only 4% of the total land area is native woodland today. Switzerland, Denmark, the Netherlands, and eastern US states provide other examples of forest transitions in the not-so-distant past.

New England, where I grew up, experienced an increase in forest cover in the 1800s. In some cases, as Mather described, people had abandoned less productive farmland. These forsaken farms reverted to forests. In other cases, people had noticed threats from deforestation and responded with conservation and reforestation policies. Fears of dependency on foreign timber during the first and second world wars, for example, motivated planting programmes. So began the 'coniferisation', where widespread planting of timber species could counteract the forest loss, or more accurately, the loss of tree cover – inviting the details of what comprises a 'forest' to change. I still want to hold on to the relatively intact forests that remain.

Wistman's Wood by Andrew Gifford
This work will be exhibited as part of Painting Britain's Rainforest with John Martin Gallery later this year.
www.jmlondon.com

Forest comes from the Latin word *foris*, meaning 'outside'. *Forestis silvis* literally means 'wood outside'. There are over 800 definitions of forest in the scientific literature. None of them is poetic or spiritual in nature. They're meant to make quantifying and tracking the world's forests possible. Our perceptions of what a forest is, or could be, shape what we aim to protect and create. If 'forest' is simply a cluster of plants above some height, we lose sight of the many benefits that can come from recovering native ecosystems. Such a holistic endeavour to grow and sustain "more forest" offers greater benefits to biodiversity, human health and wellbeing than focusing on just one service that trees offer.

Some ecologists propose the word 'renovation' in lieu of restoration. Renovate: to impart new vigour. To remodel. To revive. To repair and improve something.

Sheep may no longer roam the banks of Loch Katrine, but the forest that those little trees become will support another community of life – from the soils below ground to the towns and cities where the water flows.

With the recent passing of the EU Nature Restoration Law, many people will contribute to a new kind of green reversal. Repairing Nature need not come at the expense of other land uses, but it does require a shift in mindset from thinking of forests as separate to integrating them into culture and community. Scientific studies show how introducing natural mixes of plants and trees on farms can enhance agricultural yields in many regions. Our farms need our forests, too. I see these burgeoning forests in many shapes and forms, a part of any collective vision for a more sustainable future.

Lauren E. Oakes is a conservation scientist and science writer. The author of *In Search of the Canary Tree*, she lives in Bozeman, Montana. Her new book *Treekeepers: The Race for a Forested Future* is published by Basic Books.

Nature's assurance by Rachel Grant www.rachel-grant.com

Tuning in to the Earth

Padma Aon Prakasha writes about the power of Earth frequency, and how to find it within yourself, ahead of his live conversation with Satish Kumar this June

We often think that Earth is outside us, yet Earth is as much within us as it is outside of us. This may be a surprise, but Indigenous people the world over have known this for thousands of years. We can access Earth within us whenever we choose, through sound and meditation.

Earth is the essence and seed of our bodies, and it flows within us in six different ways, through six different parts of our body. These are our nose and sense of smell, our urge and capacity to procreate, our root chakra, the essence of our semen and ova, our innate deep-rooted sense of inertia or stability, and our individual sense of self.

Each of these six parts of us has a sound, and when we focus the sound into that part of our body, we amplify the Earth element within us, dipping into its abundant resources. The Earth within us as the Earth outside us is

an invaluable source of life for us to benefit from whenever we want. Earth within and Earth without is full of compassion, kindness, generosity and love.

To tap into this is a simple process. Through sound and meditation aligned with our hearts, we can tap into the abundant Earth at any moment, even when we cannot go outside or put our feet and bodies on the Earth.

Our planet Earth has a frequency, a series of octaves that has been measured by modern science as ranging between 7.83Hz and up to 150Hz when Earth is particularly active. We can tap into that frequency through sound and meditation, as well as listening to certain music which is especially tuned to the Earth frequency. This grounds, calms, stabilises and soothes us quickly.

Whenever your frequency is out of alignment with Earth's frequency, you become out of sync and out of alignment with your own natural rhythms, physically, emotionally, mentally and spiritually. Our electromagnetic fields and the electromagnetic fields and frequency of Earth are symbiotically and intimately intertwined.

Living in resonance with Earth's frequency slows down the experience of time for us. We align into a relaxed, patient, peaceful and content way of life. The more we connect with Earth's frequency, the more emotionally attuned we become – able to flow, let go into, and trust the natural feelings and cycles of life.

Many Indigenous societies have maintained a living connection to the Earth frequency as part of their daily way of life, which is why they often move more slowly and are generally happier. Earth helps us achieve this by encouraging us to slow down and become more still, changing our experience of time.

If we look to Aboriginal people, they measure time in millennia, not days or months. They are in no hurry at all, as they live a life-affirming wisdom that comes from moving slowly, in tune and at ease with the cycles of life and death.

Earth is our foundation for expansion, supporting, upholding, grounding, stabilising and completing. The more grounded we are, the higher we can fly. Earth forms our limits and boundaries, enabling us to define ourselves in order to fully express and manifest ourselves. Earth anchors self, creating a container for our lives, establishing healthy boundaries to feel whole within ourselves. In the Earth element, we find the things that matter to us, that which has value and meaning. Earth is the stability to maintain awareness and ground purpose in direction.

Science has been catching up to what our Indigenous societies have been practising for many years. For example, many of our emotional memories are connected to Earth's magnetic fields. NASA astronauts learned this, for when they first rocketed out of Earth's orbit and magnetic fields, they lost connection to some of their memories and identity and became disorientated. Now, every astronaut has a magnetic attenuation box on their belt to ensure they don't lose their emotional memories, reference points and sense of orientation.

NASA astronaut Scott Kelly found that spending nearly a year in space away from the Earth's frequency significantly changed his DNA. He had hundreds of "space genes" activated by this year away from Earth that altered his "immune system, DNA repair, bone formation networks and hypoxia", according to researchers. NASA confirmed that 7% of his genes remain changed and they may stay this way because of "space travel, which causes changes in a cell's biological pathways and ejection of DNA and RNA".

Through sound and meditation aligned with our hearts, we can tap into the abundant Earth at any moment

Similarly, researcher Valerie Hunt undertook experiments with people in special rooms where they removed the background hum of the Earth's field and frequency. People became deeply emotional and unbalanced, and again had problems identifying who they were. When the Earth field was restored, people felt balanced and "normal" again.

An experiment in 2011 by Nobel Prize-winner Luc Montagnier further shows us the effect Earth's fields have on us. He removed DNA from test tubes filled with water samples and exposed them to the Earth frequency. The water, which had no DNA, produced new molecules even though no life was present. He theorised that our DNA communicates via Earth's electromagnetic field, which we are all connected to.

Science has proved that our innate and deep wellbeing is connected to our staying in tune with the Earth. Yet Earth is within us too. We just have to know how to tune in to it – even when it is too cold or hot outside to do so. Thanks to ancient and Indigenous wisdom traditions, we can. R

Satish Kumar and Padma Aon Prakasha will be holding a conversation Connecting Earth and Self: The Sound of Earth and Heart, on 12 June, 7–8.30pm UK time. It will be streamed live to participants worldwide. The talk will include a guided sound healing meditation and the sounds to use to connect to Earth within you. www.resurgenceevents.org

Padma Aon Prakasha is an author and evolutionary guide bringing together ancient wisdom and modern science. He has taught in over 20 countries and is a master of sound who also leads groups on transformational journeys to sacred sites. He has appeared on radio and in publications globally. www.padmaaon.com

Wild Enchantments

Founder of the School of Intuitive Herbalism **Nathaniel Hughes** is one half of the creative team – along with artist Fiona Owen – that created a beautiful deck of cards and an accompanying book. Here he tells of the unexpected plant 'pollinator' who first shaped his future and led him into sacred plant work

It was the gorse on Arthur's Seat that broke through.

I was so used to a constant state of depression, I didn't even realise how deeply I was inside it, until I felt the soft evening glow of the flowering gorse. Dramatically framed by the rocky crags above, the swathes of gorse start to glow at dusk. It seems to me more than mere reflected sunlight; this radiant orange touches me in a way I can't explain. The warmth I feel sitting amongst these spiky beings is like nothing I've felt before: safe, complete, optimistic, glowing inside.

At first, I didn't quite realise the significance of these experiences. Like so many, I was touched by magic but almost dismissed it as a mere curiosity. Yet I found myself going back every evening, hungry for this warmth and light. The light had found its way in – even though I fought it.

Slowly, this seed of light gestated within me, until one day it led me to Napiers the Herbalists in Edinburgh (where I was at university), where the prospectus for a training in herbalism was lying on the counter. Until this moment I'd never even considered herbalism as a path, but in the space of less than a minute I knew beyond doubt that this was what I needed to do.

How I knew this I don't know. What I do know is that, as my mentor Christopher Hedley often said in years to come, once the plants have got you, they don't let go. R

Nathaniel Hughes is co-author and creator of *Wild Enchantments* with Fiona Owen. This book, along with the deck of cards featured here, is part of the duo's *Weeds in the Heart* series of offerings.

You can learn more about Nathaniel's work here:
www.schoolofintuitiveherbalism.weedsintheheart.org.uk
More about Fiona's work here:
www.johnandfionaowen.com

Wild garlic

Chamomile © Fiona Owen & Nathaniel Hughes
Wild Enchantments, 2024

Stories of human movement

Lucy Shrimpton visits Fenix, Rotterdam's new museum of migration, and discovers how art can go beyond geopolitics and a new media agenda to tell these very human stories of displacement and hope

On the modernist panorama of the Netherlands' second city, a curious serpentine structure coils skyward into the urban landscape. At first glance it could be a theme park, yet with no other hallmarks of hedonism it lures you in for further scrutiny. Sculptural in essence, and yet as light as rising air through the rooftop, the enigma is in fact known as the 'Tornado' and crests Fenix – Rotterdam's new museum of migration.

So, in a sense, you were right first time. This is a 'theme' park of sorts, only the themes here are the stories of human movement. Unlike many museums who lean heavily into history by employing a steady stream of sepia-tinted artefacts, Fenix's point of difference is that it's delivering not just a past narrative, but a present and future one too – and all through the lens of contemporary art.

"We're using art because it has the ability to go beyond politics and statistics to express ideas and emotions that engage the imagination," explains Fenix's director Anne Kremers. "The artworks and objects demonstrate that migration is timeless. They show how themes such as love, goodbyes, home and happiness are connected to it. And Fenix is about opening up new ways of expressing those experiences."

Featured artist Yinka Shonibare seems to agree that it's high time an artistic platform reframed migration in this way: "It's important that art can actually deal with some of the most important questions of our time, and I am glad that there's a museum looking at the issue of migration." His sculpture 'Refuge Astronaut' – drawing on his own personal history and stemming from a body of work that explores the complex interrelationship between Africa and Europe – forewarns of the consequences of climate change and the displacement of people, and is part of Fenix's curation *All Directions*.

I'm eager to see the fragment of the Berlin Wall, the five-metre-long painting simply called 'The Boat' (Abdalla Al Omari), and video work depicting passengers patiently boarding a flight to nowhere (Adrian Paci). There are standout new commissions too, such as the work of an artist known for his use of plastic bags to create large-scale artworks, inspired by observations of India (Hugo McCloud).

One further installation has captured my attention above all others by the weight of its description alone: a labyrinthine trail of 2,000 suitcases, each donated with its backstory. In the context of people and place, it's hard to think of another inanimate object that carries quite so much emotional weight.

Refugee Astronaut IX, 2024
by Yinka Shonibare CBE / Collection Fenix

The Suitcase Labyrinth
Photo © Mark Bolk

In the context of people and place, it's hard to think of another inanimate object that carries quite so much emotional weight

And each artwork raises its question in turn. The pop artist Red Grooms invites reflection on integration with his full-scale and immersive boardable bus. Made of fabric, the bus represents a microcosm of New York City multiculture, every seat taken bar the one on which the visitor can sit. By furnishing the visitor not just with physical space but with headspace too (notice none of the figures on the bus has a phone in hand), the work seems to foster observation, empathy and interaction, capturing something about the hope that can thrive in the spaces between seats.

The documentary photographic work of Rineke Dijkstra provides another talking point. To date, the collection comprises 17 photographs, each acknowledging a stage in the life of Almerisa, an asylum seeker who arrived in Leiden as a child in 1994. A portrait is added to the continuum every two years, perhaps to remind us that migration goes beyond a journey to a physical destination and, when cultures collide, it's a lifelong series of junctions on the road to self-identity.

By providing fresh perspectives and sparking compassion and conversation, my sense is that Fenix is making space for a fresh type of human-to-human connection, plus access to substories so often imperceptible in the geopolitical coverage provided by current affairs media. And perhaps Fenix has good reason to be optimistic about how it will be received by spectators. In 2024, the Mauritshuis museum in Den Haag (dedicated to the work of 17th-century Dutch and Flemish painters, including Vermeer's 'Girl with a Pearl Earring') commissioned a neurological study into how the brain is activated when confronted with art. It found emotional responses to original art to be ten times stronger than when the viewer is face to face with a reproduction of that work. In part, they claim, this is because of the elements that the setting contributes – for example space, frame and lighting.

The Bus, 1995 by Red Grooms / Collection Fenix
Photo © Pierre Le Hors

A ship docked at San Francisco Warehouse, around 1925.
Courtesy of Rotterdam City Archives

Fenix is making space for a fresh type of human-to-human connection

Fenix, artist impression © MAD Architects

Fenix could be said to be the latest chapter in the story of the survivor city once defined by the bombing devastation of the second world war. Devised by Droom en Daad, the cultural development foundation responsible for 'redefining Rotterdam', it was always important that the building itself played a vital messaging role. Ma Yansong, founder and principal partner of MAD Architects, the firm charged with converting what was once Europe's biggest warehouse, explains: "I'm interested in the relationship between the organic creation by Nature and the one of humans, a fascination that came from my recollections of old Beijing. Sometimes it was hard to determine where a house ended and Nature began.

"The warehouse has a vast memory and a rich past made of human stories of departure and arrival," he adds, alluding to the three million emigrants who departed these very quays bound for destinations such as the US and Canada from the 19th century. "So the task was to allow the building itself to tell the stories of migration."

In this way, Nature can be seen to provide a space not just to channel the power of art but for social interaction, no part of Fenix better epitomising this than Plein, Fenix's 2,000m² roofed city square where Rotterdammers from all over the world have free reign to celebrate and share their cultures.

And the rising air on the rooftop? "The tornado is a metaphor about the journey," Ma Yansong explains. "As you walk up, it's a staircase. The past connects with the future to bring you to the present. We need to be aware that our journey is not the only one. We are part of a big web of journeys. Once we realise that we are all interconnected, we will be able to embrace the different paths that make up our own."

Lucy Shrimpton is a Bristol-based freelance writer with bylines across the travel and culture press. Lucy's special interest lies in social histories, heritage and human-centred storytelling. Lucy is also a proofreader and French-to-English translator.
For more on the museum, visit www.fenix.nl/en

How language shapes our relationship with the natural world

Poetry editors **Briony Hughes** and **Rachel Marsh** introduce the poet Isabel Galleymore, and explore the role of grammar and vocabulary in our relationship with the more-than-human world

When identifying landscapes, flora and fauna, we unintentionally participate in a logic of naming, claiming and objectifying. In *Braiding Sweetgrass* (2020), Robin Wall Kimmerer discusses the ecologically damaging impact of English as a noun-based language. She explains, "Our toddlers speak of plants and animals as if they were people, extending to them self-intention and compassion – until we teach them not to," suggesting that the grammatical rules of English subtly instil a human-centred way of thinking as we grow and learn.

Galleymore's poetry is a playful and necessary interrogation of our linguistic relationship with the natural world

Botanical inks and modifiers, painted by Rachel Marsh

Potawatomi, a North American Indigenous language with fewer than 10 native speakers, is described by Kimmerer as a tool for thinking about the natural world in terms of co-habitation, co-dependence, and co-learning, as opposed to ownership. On reading her book, I was excited to learn that many English nouns, when translated into Potawatomi, become verbs: 'to be a hill', 'to be a bay', 'to be a mountain'. A small-scale shift into active language, according to Kimmerer, can be revolutionary: "If the maple is an *it*, we can take up the chainsaw. If the maple is a *her*, we think twice."

Isabel Galleymore's recent poetry collection, *Baby Schema* (2024), examines how we talk to, and about, our more-than-human kin under the constraints of the English language. Many of her poems are saturated with the involuntary sounds we often make when encountering the natural world. 'Wow' is repeated across all stanzas in 'On Earth', to the point that the exclamation shifts from an expression of awe to a source of embarrassment for the poetic voice – "shhh I say, these wows too much."

The prose-poem 'Campaign' personifies 'Aw', a sound we often make when encountering that which is cute or endearing. In an endangered world, might the designation of cute be a catalyst for caregiving? Or might the infantilisation of a 'yawn-paused lizard' reinforce the societal structures that perpetuate climate crisis? Galleymore's poetry is a playful and necessary interrogation of our linguistic relationship with the natural world. R

Briony Hughes

Briony Hughes is a lecturer in creative writing at Royal Holloway, University of London, where she leads the Poetry MA pathway. She was the 23/24 Poet in Residence at University of Surrey and editor at Osmosis Press. Rachel Marsh is an artist, writer and designer who is researching the meeting point of Nature and culture for a PhD at the University of the West of England.

On Earth

Wow, the nature living here,
the plant that, wow, blooms in circles
and wow, the shadows of each petal,
wow, the natter neverminded,

wow, the newt's stare in amongst
the complex nounshire living here,
nowhere, wow, the nose hair, wild,
abundant gnome-ware living here,

wow, the beetroot's ratty tail,
terry towel-like lichen, also wow,
shhh I say, these wows too much,
but what on earth am I to do;
beneath this sky dolloped with cloud
every breath is made of wow.

Campaign

When Aw succeeded Ah, Aw preached the importance of a pebble's freckled onesie, ignoring the mountain and its storm. Where Ah had ah'd over the ocean, Aw now aw'd over the ocean-dawdling dawn-hued prawn. With Ah far gone, attention turned towards the two-week seedlings of a lawn; a buzzard-hunted yawn-paused lizard; one carrot awfully small. How big the world became as it possessed once more the petit-four of insect eggs, a chicken's moon-clipped claws.

A Ha-Ha

At first, they think I am a tree
and, as such, a hug repository
and then they think no, not tree,
but where it grows – a grand estate –
the love I offer is a listed structure
and its generous prospect in which
gardens and grounds look unabridged

when between them a ha-ha is –
how could they have known – my love
was built to stop the livestock
clopping in and sitting at the escritoire
or hoofing at the cookie jar –
my love was built to stop.

Morning

I see a person – hi – I say
and to their dog – well, howdy pal
oh petal, babe and aren't you just –
and to the person – hey.

Standing behind and ahead:
the minute and its siblings.
All is possible in the future, I hear,
including the future's ending.

And when I see the dog, I say
a ha ha ha and oh my gosh
does someone want a smooch –
and to the person – morning –

Isabel Galleymore's *Baby Schema* was published by Carcanet in 2024 and was awarded the Poetry Book Society Spring Recommendation that year.
Robin Wall Kimmerer's *Braiding Sweetgrass* was published by Penguin Books in 2020.

Alma and Edita in front of the factory

Nerves of steel

J.P. O'Malley talks to the directors of a moving documentary about the citizens of Zenica, one of Europe's most polluted cities, and how they came together to fight against the local, polluting steelworks

Bosnia-Herzegovina has the highest number of deaths caused by air pollution in Europe. Globally, it ranks at number five for air pollution mortality rates. A 2017 UN factsheet on air quality in Bosnia-Herzegovina drew particular attention to Zenica – a small city in the centre of the Balkan nation with a population of approximately 100,000. "The ArcelorMittal steel plant is [one of] the largest polluters in the Zenica area," the factsheet reported.

Built at the end of the 19th century, the steel plant became state property in Tito's Yugoslavia (1945–1980), then production came to a halt during the Bosnian War (1992–1995). The world's largest steelmaker, ArcelorMittal, acquired the plant in the early 2000s, with the government of Bosnia-Herzegovina holding onto a small share.

The reconstruction of post-war Bosnia saw "global capital move in, public property devalued, and international corporations allowed to buy up [state assets] for peanuts," explains Zlatko Pranjić, a Bosnian film-maker from Sarajevo. "But little attention was paid to the environment or to the concerns of local citizens – corruption was rife and there wasn't much regulation."

ArcelorMittal failed to deliver on promises to reduce pollution from the chimneys and smokestacks of the Zenica steelworks, reports a 2017 article in *The Guardian*, which interviewed many citizens living in Zenica. One of those residents is Samir Lemeš, president of environmental group Eko Forum Zenica. "Lemeš is my childhood friend and Zenica is my hometown," shares Pranjić, who left his war-torn homeland three decades ago, and ended up in London, where he now lives.

That *Guardian* article inspired the Bosnian director to

Samir Lemeš in front of the coke plant
Stills © Nanna Frank Møller

return to Zenica with a camera to capture the pollution first-hand. He travelled there with Danish film-maker Nanna Frank Møller. "The pollution in Zenica was surreal and like nothing I had ever seen," she says.

The two directors were greeted with enthusiasm and goodwill from citizens and government officials in Zenica. "But many locals believed pollution was unavoidable, and even necessary, for employment to continue at the Zenica steel plant," says Pranjić.

"The pollution in Zenica was surreal and like nothing I had ever seen"

"We met and listened to [resident] Samir Lemeš, and then built up a relationship with the locals. We continued filming for the next seven years," Frank Møller explains. The result of that work is their documentary, *The Sky Above Zenica*, which won the Special Environmental Awareness Award at the 30th Sarajevo Film Festival in 2024.

Co-directed by Pranjić and Frank Møller, the observational documentary tells the story of a group of local citizens fighting for their basic human right to live in a clean and healthy environment, free from pollution. It wasn't easy, though, as the opening scene demonstrates. It shows poisonous black smoke bellowing from the chimneys of the coking plant in Zenica. We are then given a brief lesson on the science of steelmaking.

To make steel in a blast furnace, coal is turned into coke, a porous substance that is nearly all carbon. The burning coke strips the oxygen from iron ore, leaving elemental metal. The raw iron is then converted into steel in a second furnace by adjusting its chemical composition. Around two-thirds of all steel produced globally is made in this way. Most steel plants, however, use blast furnace gas filters, which purify the gas produced during the conversion process of iron ore into usable metal.

"The smoke must be captured and purified, but the coking plant [in Zenica] does not have filters," Lemeš explains early on in the documentary. The environmental activist also notes that, without filters, the coking plant in Zenica produced toxic substances into the atmosphere, like benzene and benzo[a]pyrene, both of which can cause cancer and leukaemia.

ArcelorMittal, we learn, was granted a government licence to operate in Zenica in 2010, on the condition that it would measure these toxic substances regularly. But the corporation neglected and delayed its environmental duties. We also learn that ArcelorMittal used better techniques to reduce emissions at its factories elsewhere in Europe – in Belgium, Italy and France. *The Sky Above Zenica* follows Eko Forum's environmental campaign, led by Lemeš, to get the world's largest steel producer to

Director Nanna Frank Møller
Photo: Nancy Frandsen

comply with adequate safety standards. "The corporation was given a new environment permit every few years, but did not fulfil those measures," says Pranjić.

Finally, in 2022, with added pressure coming from Eko Forum, ArcelorMittal began tracking and testing carcinogenic pollutants around its coking plant in Zenica. The testing showed dangerous chemicals exceeding the legal norms by 50 to 250 times. The analysis of toxins in the river Bosna locally, meanwhile, indicated polycyclic aromatic hydrocarbons levels 910 times higher than the legal norm.

The documentary also tells another story, running parallel to this main narrative. This concerns the controversy surrounding the construction of a new heat plant, Toplana Zenica. Most of the funds to build it came from the European Bank for Reconstruction and Development (EBRD). Construction began in 2020 and was completed two years later. ArcelorMittal Zenica is the main shareholder, owning a 50% stake. The other main shareholders are the city of Zenica, KPA Unicon and Finnfund.

The EBRD included Toplana Zenica as part of its so-called Green City Action Plans. Eko Forum, though, drew attention to a bizarre irony of the alleged new green heating plant. Since the ArcelorMittal plant was to become the main fuel source for the new heat plant, pollution was unavoidable. "Building Toplana Zenica eliminated 200,000 tons of coal that was used for the old heating plant. But it was replaced with the dirty gases from the coking plant," Pranjić explains.

In March 2024, as *The Sky Above Zenica* was going into the production phase, ArcelorMittal announced that its coking plant in Zenica would permanently close. "This decision was made for economic and environmental reasons," an official statement from the steel producer said. "The closure of the coking plant has resulted in an 80% decrease in diffuse emissions from the plant in Zenica."

"Now that the coking plant has been destroyed, Toplana Zenica heat plant will use [better technology]," says Pranjić. "They still use this coke in production. But instead of producing coke in Zenica, the corporation now bring it from elsewhere, but it's purified, which makes a huge difference."

There have been some attempts to bring ArcelorMittal to court. But none have been successful. A lawsuit was filed by Eko Forum Zenica, against ArcelorMittal Zenica, for endangering the environment with devices, but this was rejected by the Zenica Cantonal Prosecutor's Office in 2020, due to insufficient evidence. The Hasanbašić family from Zenica also pursued a private lawsuit against ArcelorMittal, seeking compensation for health and property, but the family lost, due to the inability to substantiate the extent of the damage inflicted.

"We did film some court proceedings, but they didn't make it into the final film," Pranjić explains. "But we never heard locals talking about compensation being their goal. They just wanted their environment to improve." According to a 2023 Greenpeace report, Zenica is the sixth most polluted city in Europe. "There is still a lot of work to be done for Eko Forum and for citizens of Zenica," concludes Pranjić.

Frank Møller hopes *The Sky Above Zenica*, at the very least, will engage an international audience in questions related to the environment. "We want viewers to reflect on what they have seen in this film," the director shares. "Then they might start asking: why do we have a planet that is breaking down, and why do we have some societies that are so poor and other societies that are so rich? To answer these questions, we have to take a stand as human beings."

The Sky Above Zenica is a documentary film produced by Magic Hour Films in Denmark in co-production with HBO Europe s.r.o. and Realstage, Bosnia, and supported by the Danish Film Institute and Ministry of Culture, Canton Sarajevo.

J.P. O'Malley is a cultural critic, journalist and writer. He regularly writes book reviews and author profiles for the *Sunday Independent* (Ireland), *New Humanist* (UK), *The New European* (UK), *The Globe and Mail* (Canada), and *The Age* (Australia).

WITHIN (FOR THE OCEANS), 2024 by Antony Gormley
Seaweed ink on paper (76.2cm x 111.5cm)

Art For Your Oceans

Artwise curators **Laura Culpan** and **Susie Allen** introduce their latest project with WWF

Art For Your Oceans (AFYO) is the latest fundraising arts project devised by Artwise to support the conservation work of WWF in the UK and further afield – this time focusing on the importance of ocean health.

We have commissioned 17 leading contemporary artists, including Antony Gormley, Emma Talbot and Laura Ford, to create works using a new seaweed ink called OCEAN INK®, produced by Oceanium in Scotland. This is the first time an exhibition has been created using this unique medium, and we have both been captivated by the natural gold colour of the ink, as well as its entirely traceable, sustainable and biodegradable properties.

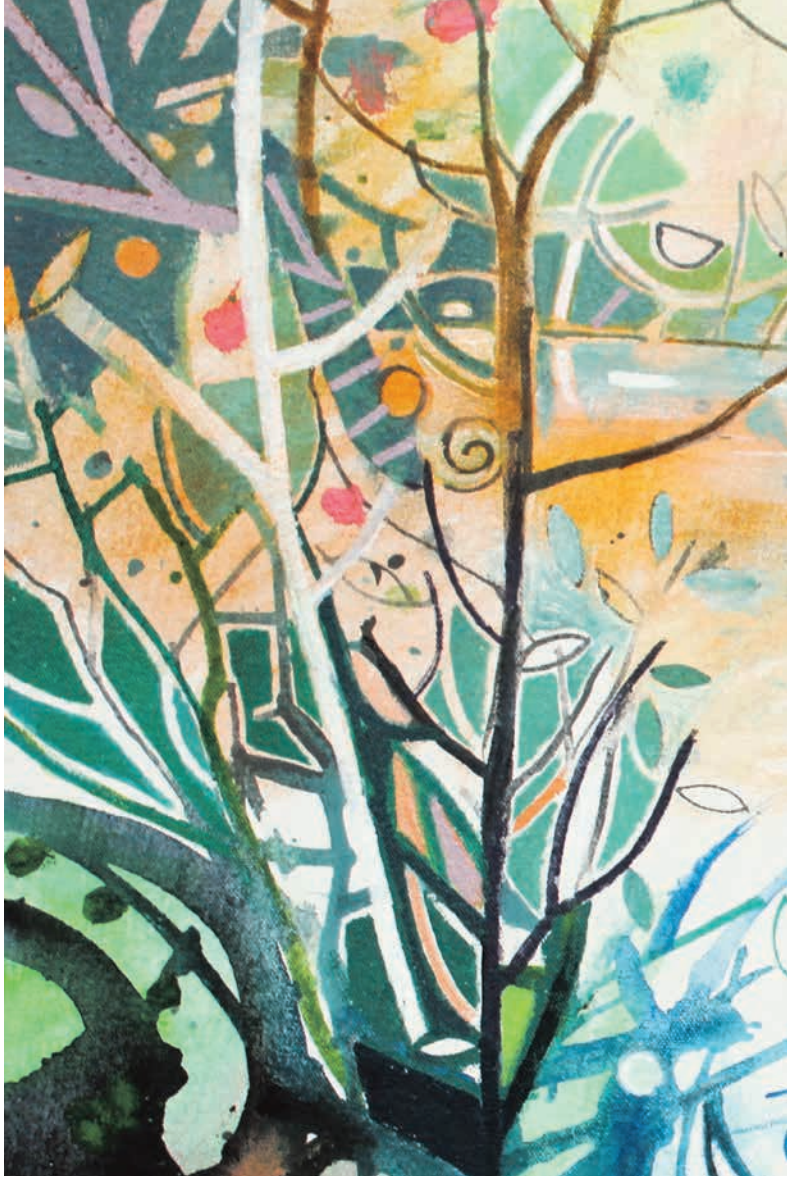
All the artists have approached using the ink in their own distinctive ways, creating works which range from painting with OCEAN INK® on silk to larger sculptural installations. Antony Gormley, for example, has created a large-scale work on paper exclusively in OCEAN INK® entitled 'WITHIN (FOR THE OCEANS)' which appears to show the human figure floating in the sea, from the underwater perspective, the ripples and marks made perhaps symbolic of the effect we humans are having on the natural world.

It's been a joy to offer such an unusual platform for our invited artists to create these beautiful and thought-provoking works, the sale of which will also help safeguard the future of our ocean. R

Art For Your Oceans runs from 7 to 15 May at Sotheby's, London. www.tinyurl.com/ART-FOR-YOUR-OCEANS
Laura Culpan and Susie Allen run Artwise, a curatorial collective based in London. www.artwisecurators.com

Nature writing that allows Nature to speak

Writer **Adam Weymouth** joins Robert Macfarlane on a journey along three distinctive bodies of water to unpick the question of rivers and their rights



Is a River Alive?
Robert Macfarlane
Hamish Hamilton, 2025
ISBN: 9780241624814

Early in 2007, keen to travel after university, I was stumbling around on the internet when I came across Los Cedros Biological Reserve, high in the cloud forests of northern Ecuador. The website appeared to have been cobbled together in an afternoon. They were looking for little more than a willingness to work and, on impulse, I sent an email. A few weeks later I found myself on a mule, trekking six hours up into the forest where I would spend the next two months under the tutelage of the magnificent Josef DeCoux.

Josef had drifted south from the US in the eighties and wound up in these woods. He was in perpetual battle with the loggers and miners who intended to convert the cloud forest into cash, sustained by only his passion, his volunteers, and rum. The mood was a little *Heart of Darkness* (Joseph Conrad, 1899), and Los Cedros was as unique as DeCoux. It was a wonder – lush and loaded with life. It was home to orchids and frogs found nowhere else on the planet, and my job was to guide the biologists who came to study them. One day, a friend was bitten by a snake – a story that would require this entire review to do it justice. Suffice to say, my time there was formative. It showed me how the world could be.

So imagine my surprise to open *Is a River Alive?* and see its dedication to DeCoux. The first third of Macfarlane's book is taken up with his own formative journey into Los Cedros. In 2008 Ecuador enshrined the Rights of Nature into its constitution, on the initiative of many of the country's Indigenous groups. Subsequently, DeCoux brought a case against the mining companies who were surveying in the forest. In 2021, in an unprecedented ruling, Ecuador's Constitutional Court found that mining would violate Los Cedros's right to exist: the rights of its animals, its forests, its rivers. Nature had value unto itself, not just in what it was to us. Barrister Monica Feria-Tinta described the decision to be as significant as the publication of the Universal Declaration of Human Rights in 1948. This pocket of pristine forest may just be responsible for reshaping humanity's relation to the planet.

From Ecuador, Macfarlane heads to Chennai in southern India, a city raised on three rivers – the Adyar, the Cooum and the Kosasthalaiyar. Each is now comprehensively poisoned, thick with effluent. If rivers can be alive then these are dead, or nearly. He travels the length of the Adyar with Yuvan Aves, one of many dedicated young people refusing to accept such death, and fighting on all fronts: in courts, in schools, in reviving marshlands, and in saving sea turtles, one egg at a time. Despair, Macfarlane reminds us, is a privilege. There is much to be learned from a mindset such as Yuvan's – a determination as resolute as a river's urgency for the sea.

The book's final third concerns a kayak trip down the Mutehekau Shipu in Quebec, a wild, free-flowing river nearly 300km long, which electricity company Hydro-Québec now has in its sights. Sacred to the Innu First Nation, the Mutehekau Shipu was declared a legal person in 2021 – the first river in Canada to receive such status. Yet the river's freedom is still not assured – nothing, it seems, ever is. As Macfarlane descends the untamed water through this intact place, its alternative future, a placid lake backing up behind a dam, is impossible to

Tangled Bank, Summer River, 2023 by David Wiseman ARWS LG
www.davidwiseman.org.uk

ignore. Immersed in his environment, in a tiny boat in this huge landscape, the river emerges for him as a fully formed character, animating the land through which it flows. Seen through Macfarlane's eyes, it could not be clearer how violent such a loss would be, not just to us but to all to whom it gives life, and ultimately to the river itself.

If a river was truly alive, then how would we listen to what it wants?

Everything you would expect from Macfarlane's work is here: the precise, vivid language; the deep engagement in place; his ongoing interrogation of how to translate place into text. But there is something more urgent too, as he gives voice and expression to a radical idea. A meaningful Rights of Nature would overhaul how we thought about our place upon the planet. It would force the question: if a river was truly alive, then how would we listen to what it wants? This is what Nature writing should be for.

I have rarely delved into a book's Acknowledgements as part of a review, but stretching to 11 pages of small font, plus three additional pages of photos, those that conclude *Is a River Alive?* make up a significant chunk of the text. It would be wrong to overlook them, because they speak to so much of what this book is about. Some of Macfarlane's early work received criticism for using place as a backdrop to personal exploration, overlooking the people culturally and politically entangled with those places. It is not an accusation that could be made of this book, which credits both the local people that he journeys with and the rivers themselves as co-authors of the text. The whole book is about entanglements, rich in collaboration with both human and more-than-human worlds, and as such it is his most political and important work to date.

In the first pages, Macfarlane describes his young son, Will, asking him what his new book is about. When he learns the title, Will shoots back that it's going to be a short book then, because the answer is quite clearly yes. It can take adults a long time to see what is evident to children. But by the time I left Macfarlane, where the Mutehekau Shipu meets the sea, I felt able to answer the title's question just as definitively. It will be interesting to see what conversations the book sets in motion – this is a vision of the world that is desperately needed, a question that is now screaming to be answered.

Adam Weymouth is a writer, whose book *Kings of the Yukon* won *The Sunday Times* Young Writer of the Year. His new book, *Lone Wolf* (Penguin), is out now. See www.adamweymouth.com

Learning from how Nature shares harvests

Is the slow, people-led ethos of gift economies radical enough, asks author **Holly Rose**, or could it be a balm for times to come?

Detail from A museum of Bohemian waxwings by Jane Tomlinson www.janetomlinson.com

The Serviceberry:
An Economy of Gifts and Abundance
Robin Wall Kimmerer
Penguin Books, 2024
ISBN: 9780241721308

If you've read *Braiding Sweetgrass*, Robin Wall Kimmerer's bestselling paean to the Earth and its beings, *The Serviceberry* is a natural extension to the conversations she cultivated. Expanded from a magazine essay, it offers a peek into the basket of economic alternatives to capitalism which Kimmerer has foraged. Bundled up as "gift economies", the ideations shared are seeded from Indigenous cultures, Nature mimicry, motherhood and mutual aid. Each inspiration for a gift economy is grounded in the recognition of the "unconditional love that plants have for people", and the reality that "We humans must consume since we are animals to whom the gift of photosynthesis was not given."

While the mindset of reciprocity encouraged by Kimmerer's first book planted the seeds of change in so many, *The Serviceberry* offers multiple pathways to further enhance praxis. In gift economies, goods and services circulate without explicit expectations of direct compensation. Rather than goods and money, the currency is gratitude, connection and communal wellbeing. An economy in which one receives wealth and security by sharing abundance rather than hoarding.

Gift economies already exist: "the Cedar Waxwing who dropped the seed, the sun, the rain, the early spring flies who pollinated the flowers"

Unlike the (false) narrative of scarcity required to uphold capitalism, produced by extractive personalities (whom she calls 'Darrens' after ExxonMobil's CEO), the mentality of a "gift economy" names all we receive from the Earth as a gift. This hopes to create interconnected beings who feel their membership within the web of life and are naturally accountable for all the gifts they receive.

Kimmerer reminds us that gift economies already exist. They exist in the relationship between mother and baby. The mutuality that arises spontaneously in times of disaster when people give freely to one another through networks of mutual aid. It is in the symbiotic relationships of "more-than-human-beings" like "the Maples who gave their leaves to the soil, the countless invertebrates and microbes who exchanged nutrients and energy to build the humus in which a Serviceberry seed could take root, the Cedar Waxwing who dropped the seed, the sun, the rain, the early spring flies who pollinated the flowers, the farmer who wielded the shovel to tenderly settle the seedlings". The list goes on. In each of these instances, the shape becomes circular, and acts of gratitude become shared culture.

As in *Braiding Sweetgrass*, Kimmerer challenges us to practise reciprocity, to learn the circular story behind all the gifts we receive, and to follow the thread each item of the living world experiences to become what it is. She works to help us imagine the ways in which we might offer gifts in return for all we receive. And the actions we can take to practise that gratitude.

It is an incredibly hopeful read, but somewhat lacks urgency by suggesting the new gift economy relies on "the slow, steady replacement of that which does not serve ecological flourishing". While Kimmerer acknowledges our place within "the tension between what is and what is possible", there is no clear pointed solution to the major polluters who drive the crises we face. Instead, her beautiful prose is directed at individuals, perpetuating change from the bottom up, an angle which climate activists have warned is a backwards approach.

Yet meaningful social change can influence collective culture, and sometimes that change moves with unexpected swiftness. It is indeed possible that in applying to our communities the mosaic of possibilities Kimmerer shares, we might fill the deep gaps our current extractive economy creates. Undoubtedly, by nurturing place-based intentional communities of mutual self-reliance and reciprocity, we'll be more prepared for the big changes and challenges of the very near future. Enabling us to weather the world to come while grounded in lived experience of the world we wish to create.

Because there is always hope where there is life. And there is always life where there is hope.

Holly Rose is a British-Canadian writer and children's book author focusing on sacred ecology and food sovereignty. You can follow her work on Instagram @hollyrose.eco or on her blog www.hollyrose.eco

Choosing stewardship of our food system

Rashi Goel finds wisdom and respite in Vandana Shiva's work

The Nature of Nature:
The Metabolic Disorder of Climate Change
Vandana Shiva
Chelsea Green, 2024
ISBN: 9781645022879

I've been a fan of Vandana Shiva's work for as long as I have been passionate about the environment, food and the connection between our mind, body and surroundings. It was during my late twenties that I first immersed myself in her work. In 2015, I was running a business selling organic food and chemical-free products, and Shiva's name came up in many conversations – peers revered her for the environmental activist and scholar that she was. She was fighting against GMOs, and I was deeply inspired by all that she had to say about preserving seeds – the very essence of Nature. So when her latest work, *The Nature of Nature*, was announced, I sought it out like a thirsty traveller seeks out water in a desert. In these times of terrible news, I constantly look towards environmental experts for their wisdom and guidance.

In this book, Shiva highlights how large-scale industrial farming, genetic modification, and monoculture farming have devastated biodiversity, displaced farmers, and led to environmental degradation. She contrasts this with Indigenous and traditional farming practices, which she believes hold the key to restoring ecological balance and ensuring food sovereignty. She challenges the modern world's exploitative relationship with Nature and urges us to reconnect. She critiques the reductionist view that treats Nature as a mere resource to be plundered and commodified, and instead advocates for a holistic approach that respects natural cycles and limits. Throughout the book, Shiva presents real-world examples and personal anecdotes that illustrate the consequences of industrialisation on agriculture and communities.

Photo © Rohit Jain
Instagram: photoforacause

From the plight of small farmers to the destruction of forests for commercial gain, Shiva paints a vivid picture of the environmental challenges facing the world today. She goes on to write passionately about how humanity must shift from a system of exploitation to one of stewardship. She advocates for regenerative agriculture, biodiversity conservation, and the protection of Indigenous knowledge systems. According to her, these solutions are not just environmental, but also social and economic, ensuring long-term sustainability and resilience.

> Nature operates in a web of relationships where everything has a role to play – disrupting one element can have far-reaching consequences

Throughout this deeply insightful book, Shiva calls upon the reader to rethink the dominant economic and agricultural models that prioritise corporate interests over environmental wellbeing. In fact, she calls on us as readers to question the rights of corporations and to take back what is rightfully ours. She explains elaborately why the richest 1% of this planet are to blame for Nature's downfall. She guides people like me, who struggle to find ways to solve this problem at scale, to step in the direction of needle-moving change. She focuses on the word Big – putting Big Agriculture, Big Tech, Big Data, Big Food, Big Oil at the centre of the conversation, reminding us where to focus our attention.

Shiva writes with clarity and conviction, making her arguments easy to understand even for those new to environmental topics. She argues that Nature operates in a web of relationships where everything has a role to play – disrupting one element can have far-reaching consequences. This is a powerful and inspiring book that challenges the status quo and offers a hopeful vision for the future. It reminds us that by respecting and nurturing Nature, we can create a healthier, more just, and more sustainable world for generations to come. Shiva lays out a genuine and practical approach to the problems our world is facing. While it is not a light book to read, it serves as a wake-up call for individuals, policymakers and businesses to recognise the value of working with Nature rather than against it. I just hope it inspires more people to actually listen.

Rashi Goel is a freelance writer based in Goa, India. She writes about the environment, health, wellness and, most recently, parenting. You can find her on Instagram @rashicreates

It's a question of equity and better balance

Mark Cocker unpicks a book that addresses the system changes needed to create lasting change for people, planet and Nature

Just Earth: How a Fairer World Will Save the Planet
Tony Juniper
Bloomsbury, 2025
ISBN: 9781399410670

Illustration © Paul Tong / Ikon Images

The current chair of Natural England, Tony Juniper, could arguably be the single most effective champion of British Nature this century. He is also an accomplished author, and *Just Earth* is his most important book to date.

Its thesis is that the world's current climate and ecological crises are treated as issues centring on human relations with the other parts of life. Our broken understanding of those connections, our false insistence that we are *outside* Nature, is the kernel of the problem. Juniper acknowledges these arguments, but further contends that nested within them is an under-acknowledged issue of social and political justice. Essentially, we live in a profoundly unequal world and the gulf between those who have and those who are left behind is widening.

Social justice and living within the means of planet Earth are part of a single, achievable goal

Since the 1980s neoliberal ideas, initially championed by the likes of Margaret Thatcher and Ronald Reagan, have become orthodox economic policies for much of the west. They may have led to great wealth creation, but they also cancelled out the achievements of a post-war consensus, that had closed the gap between the wealthy and poor. The high point of equality in British society was in 1979.

A pattern of massive inequality has since unfolded almost globally. *Just Earth* is packed with hard facts and detailed statistics, many of which make for sober reading. Half of humanity now shares just one-eighth of the world's resources. Meanwhile, the richest 1% – the likes of the British royal family, for example, with its estimated £21.3 billion in assets – now holds one third of all the planet's calculable wealth.

Even worse, in 2019 just 2,153 individual mega-billionaires controlled more wealth than the poorest 4.6 billion people. This inequality afflicts both the wealthiest and the poorest countries on Earth. Since the 1980s, US worker productivity has doubled but almost all the resulting gains have gone to company owners and commodity investors. Today one in eight or nine US citizens lives below the poverty line.

To use a cinematographic metaphor, Juniper moves routinely from a wide-angle panorama to more close-focus detail so that we see how inequalities play out at the local level. In Britain, for instance, the poorest experience not only the disadvantages we typically describe, but also live with more subtle impacts, often linked to access to Nature. People with low incomes are more likely to live near polluting factories, in areas with poor air quality (yet are three times less likely to own a car themselves), with less opportunity to visit local green spaces, and more likely to experience higher rates of obesity and type 2 diabetes.

This book is both eloquent and frustrating. So often it made me want to shout out repeatedly, how could we be so politically and morally blind? Yet the arguments are couched in the most reasonable terms, and while the book might be incendiary, the author is not. On the contrary, he is the arch-pragmatist who

seeks solutions to the challenges he identifies. In this sense, it is a deeply practical work.

Yet perhaps the most important contribution of *Just Earth* is its systematic demolition of the false argument – often advanced by the super-rich seeking to defend their self-interests – that Nature is an expensive luxury: its despoliation and loss are the unavoidable consequences of wealth creation. Juniper makes it clear that social justice and living within the means of planet Earth are part of a single, achievable goal. They are not binary or separate, they are inextricably entangled.

Mark Cocker is an award-winning author whose latest book is a celebration of the interconnectedness of all life entitled *One Midsummer's Day* (Jonathan Cape).

Where should we direct our action?

Russell Warfield finds inconsistency in an argument against the current environmental politics and protest

Climate Radicals:
Why Our Environmental Politics Isn't Working
Cameron Abadi
Columbia Global Reports, 2024
ISBN: 9798987053645

Cameron Abadi's *Climate Radicals* is a punchy and compelling investigation into environmental direct action, and poses the question, are 'radical' climate activists hurting the cause? The author believes that, yes, they are.

Abadi's book focuses mainly on Germany, where the author lives, but happily the three strands of activism he investigates have strong parallels in most western countries, especially the UK. Fridays For Future are known here as the school strikers; Letzte Generation employ disruptive tactics akin to Just Stop Oil; and Ende Gelände is a direct inspiration for UK groups like Reclaim the Power that undertake direct occupation and sabotage of polluting industries.

To his credit, Abadi spends a fair amount of time among the protesters while writing this book – both in training and planning sessions, and during some direct action. He shows a sincere curiosity about these people and their motivations for participating. It is overwhelmingly clear, however, that at best he primarily views these individuals as being naive, and at worst flirts with a tone of outright contempt.

"Nobody stops to ask," he claims, while attending a training session, "what exactly are we all doing here? What was the deeper purpose of the protests?" In a book that promises an examination of the vital intersection between contemporary politics and protest, comments like these could be perceived as undercutting the seriousness of his work.

The book's narrative turns to the terrain of electoral politics, focusing on Germany's Green Party (a successful chapter of the international Green movement) as the vehicle and the means through which climate policy will actually be advanced. But, having set up this framing, Abadi then spends the rest of the book tearing it down, suggesting how Greens elected to power are subject to compromise and disappointment, and how even flagship legislation like the 2022 Inflation Reduction Act (IRA) in the US has resulted in a net expansion of fossil fuels.

Abadi doesn't make entirely clear what he sees as being the relationship between increasingly 'radical' direct action and the limitations and shortcomings of democratic, electoral politics. The most you can extrapolate from his argument is that activists who block roads or similar are unpopular among the public, and ineffectual in driving change. It does not follow from this, of course, that protest is actively counterproductive or hinders progress that would otherwise be made by policymakers.

If nobody glued themselves to Barclays' windows, would the limitations of democratic politics suddenly vanish? If nobody blocked roads, would the IRA Act have included provision to wind down fossil fuel production? Of course not. But Abadi presents the examples of activists being screamed at by motorists by the side of the road as if they themselves are the reason that "our environmental politics isn't working".

On the contrary, there is some anecdotal evidence that the rise in these strands of activism from around 2019 has had a measurably positive impact on climate politics. In the UK during the 2010s, less than 10% of people would list climate as one of the top three issues they cared about. After 2019, this switched almost overnight to a quarter of the population, peaking at over a third.

Given that Abadi writes with such authority about the people he is documenting, it's frustrating that his argument amounts to saying that neither 'radical' protest nor formal politics has yet risen to the challenge of grappling with the climate crisis, while purporting to be baffled why protest persists under such conditions. Yes, our environmental politics isn't working, but I'd look to the corporate hijack of politics and limitless lobbying from fossil fuel fat cats.

Russell Warfield is Head of Communications at the climate charity Possible and Reviews Editor for *Resurgence & Ecologist*.

The case for coexistence

Nature writer **Tiffany Francis-Baker** finds hope in this documentary about sharing our landscapes once again with wolves

The Wolf Within
Directed by Federico Manneschi
www.thewolfwithin.eu

"Nature is not our garden," explains zoologist and researcher Mia Canestrini, hiking through the pristine forests of her home country on the slopes of the Dolomites in Italy. This mountainous landscape and the landworkers who live here – including a mushroom forager, a shepherd, a boar hunter and a wildlife tour guide – are at the heart of this rewilding documentary with a difference. While the film is speckled with breathtaking visuals of wolf packs roaming the Alpine foothills, the real focus is on the people who are learning to share their territory with these animals, thriving in their native lands for the first time since their near eradication in the mid-20th century.

But it was not just the wolves' success – or the breathtaking cinematography – that left me feeling cautiously hopeful by the end of this film. America's Yellowstone experiment was one of the first to introduce the idea of keystone rewilding to a mainstream audience, with their reintroduced wolf packs changing the shape of the entire landscape through revitalised predator, prey and plant relationships. In the face of the climate crisis, making our landscapes healthier and more resilient has never been more important. As this documentary shows, in the last few decades there has been a cultural shift towards European wolf populations that suggests their role in rebuilding broken ecosystems may be coming to the fore. One shepherd acknowledges that the wolves are, by nature, his greatest enemy, but at the same time questions whether it is right to blame the wolves for destabilising his business, instead of blaming the profiteering systems that have brought traditional, sustainable farming practices like his to their knees.

Photos © The European Nature Trust / Alessio Bariviera

It was not just the wolves' success – or the breathtaking cinematography – that left me feeling cautiously hopeful by the end of this film

Set against the backdrop of the Italian forests in autumn, the season of delicate balance between life and death, the colours of the landscape seem to be reflected in the coats of the wolves themselves. They are, and have always been, an integrated part of this land. And yet the timing of this film, which came out in 2024, is no accident. In December 2014, the Bern Convention's Standing Committee voted to lower the protection status of wolves in a move considered by many to be politically motivated, rather than science-based. With the help of this emotive yet rational film, campaigners are hoping to reverse their decision and continue safeguarding the future of people and wolves together. "The wolf", says zoologist Luigi Boitani, "is no longer an animal with two ears, four legs and one tail: it is a political subject."

Tiffany Francis-Baker is a Nature writer and illustrator from the South Downs, Hampshire. Her latest book is *Ebb and Flow: A Guide to Seasonal Living* (Bloomsbury). See www.tiffanyfrancisbaker.com

Reimagining a flourishing future

Edward Davey reviews a vision of what true system transformation could really look like – and how we can still get there

Transformative Adaptation:
Another World Is Still Just Possible
Rupert Read and Morgan Phillips, with Manda Scott
Permanent Publications, 2024
ISBN: 9781856232258

Rupert Read and Morgan Phillips bring us an insightful and timely collection of essays on the world's pressing need for transformative adaptation. Their book came out at an important moment: the planet has breached the 1.5C temperature limit set out in the Paris Agreement, and Donald Trump has re-entered the White House with a new zeal to resile from climate action, and "drill, baby, drill." In keeping with the times, the book sets out a bracing, alternative vision of the way forward – rooted in action on the ground, communities, direct action, and new efforts to broker greater democracy and civic engagement. It finds patterns in the response in the US to the Los Angeles fires and Trump's early actions, with a resurgence of civic action and community-led activism across the country.

Over a series of chapters, Read and Phillips describe the challenges of where we are now and show how there is still a chance that the world can put things right. How we can transition to a new system in which we live in harmony with Nature and keep the worst of an unravelling climate at bay. Written before the result of the US election, there is little that one would update in its aftermath – all the central prescriptions still stand, but they speak with a heightened sense of urgency.

The book is wide-ranging. Read sets the context in an opening chapter on 'A Moment of Criticality'; Phillips and Read then describe 'The Age of Adaptation', before Read explains what 'Transformative Adaptation' really is: adaptation grounded in systems change and "major psychological adjustments away from what has been 'normal'". No tinkering at the edges here: only a whole change in the way we live will enable us to withstand the coming decades and forge a way through.

The second half of the book is more focused on practical action. There is a chapter on agroforestry as one example of transformative adaptation. It is inspiring to learn that in northern Syria ("or southern Kurdistan") the community has built a Make Rojava Green Again movement. Perhaps many more countries could have such hubs in a time of climate crisis, as well as building broader climate hubs such as those I have seen emerging in communities in Sussex – people gathering and working to make common cause on climate.

In a later chapter, Read criticises the COP process for its record of failure and a history of broken promises, using the word 'nemesis' to describe the endless recycling of the promise

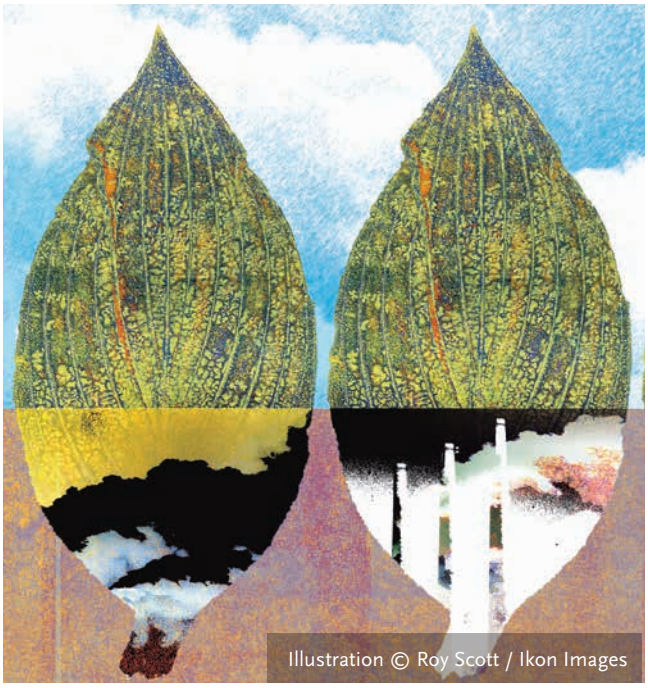


Illustration © Roy Scott / Ikon Images

to "keep 1.5 alive". While I agree that COPs have become too big, with far too many attendees, I also agree with the UK Special Representative for Nature, Ruth Davis, who spoke recently at Kew Gardens about the value of COPs as a global meeting point where all have a voice, and of how much more extreme the climate would already have become without the Paris Agreement.

Where, then, does the solution lie? Read and co-authors coalesce in a series of concluding chapters around the need for community climate action, for "transformative learning for transformative adaptation", for education and a focus on the classroom (a fascinating and heartfelt chapter), for permaculture and for democratic renewal. The final chapters are close in sentiment and ideas to many *Resurgence* readers' hearts, and perhaps this is indeed the future of the world as we know it, at a time of breakdown. The authors conclude with a lucid declaration for transformative adaptation.

I was left wondering, however, whether the action on the ground the book calls for might still be backed by a new multilateral coalition of the willing working together at the global level. And whether this work together in a spirit of mutuality and shared understanding among nations of goodwill might be the necessary foil to a new groundswell of community-led action in every country and landscape on Earth.

Edward Davey is Head of the World Resources Institute UK and lives in Lewes, East Sussex.

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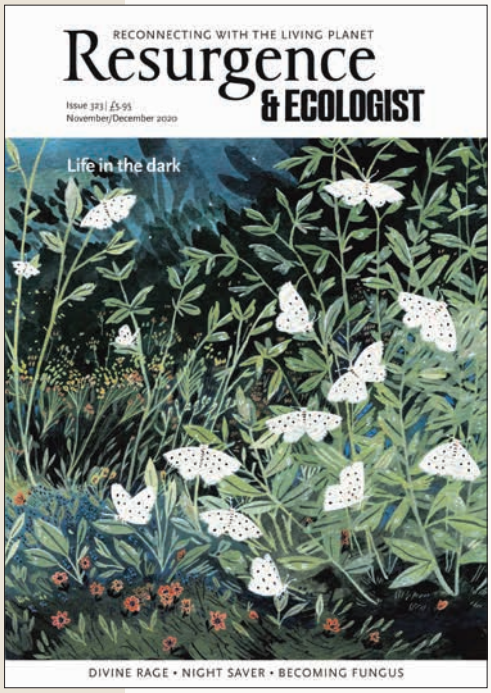

2020

A SWIFT RETURN

by Anna Feeney

"Swifts, with their characteristic scream as they careen around the rooftops, are a beloved sign of spring to many in the UK, but where do they go in winter? Well, it's a bit of a complex story, to which the short answer is, somewhere in Africa, but we're still learning where and why. For a slightly longer answer, read on."

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2005

GIFT OF FOOD

By Vandana Shiva

ISSUE 228
PAGE 24

2012

LESSONS FROM THE BEES

By Rashid Maxwell

ISSUE 272
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2022

THE LAND OF BEES

by Simon Mitambo

ISSUE 331
PAGE 21

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www.resurgence.org/archive

"Love suffices in itself; it pleases in itself and for its own sake. It is its own merit and reward. Love does not need any cause beyond itself, nor any fruit – its fruit is its use. I love because I love; I love so that I may love. Love is a great thing. If it reverts to its own principle, if it returns to its origin, if it flows back into its source, it always draws from it the power to flow forth continuously."

Bernard of Clairvaux (1090–1153)

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Susan Elizabeth Clark

In *Kindness... is the New Cool*, Susan Elizabeth Clark will teach you that adopting a Kindness practice will not only make you feel good, it will open doors for you to realise your dreams. Featuring exercises, affirmations, rituals and more, Susan will teach you how to spread Kindness on a daily basis, making the world a better place for everyone.
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Satish Kumar

Small World, Big Ideas collects twelve of the most inspiring and courageous activists together to present an inspiring vision of what each of us can do to build a better world today.
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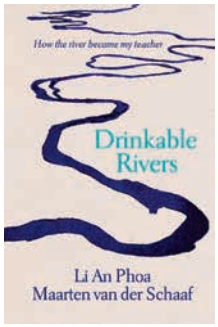

DRINKABLE RIVERS

Li An Phoa & Maarten van der Schaaf

When Li An Phoa ventured into the wilderness in the Canadian Subarctic, she discovered she could drink from the river. Returning three years later, she found the river too polluted to drink from. Ever since, Li An has been drawing attention to drinkable rivers.

This book is a tapestry of travelogue, memoir, reportage and poetry, taking readers on an adventure along rivers on four continents. Li An continuously asks the question, how can our rivers become drinkable again?
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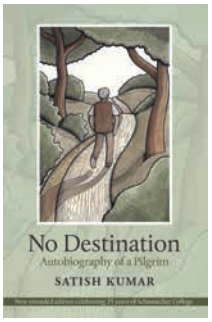

NO DESTINATION: AUTOBIOGRAPHY OF A PILGRIM

Satish Kumar

When he was nine years old, Satish Kumar joined the Jain monks. At the age of 18 he became a campaigner for land reform, working to turn Gandhi's vision of a renewed India into reality. *No Destination* is an exhilarating account of an extraordinary life. Satish recounts his extraordinary 8,000-mile peace pilgrimage, walking from India to America without any money, through mountains, deserts, storms and snow. It was an adventure during which he delivered packets of 'peace tea' to the leaders of the four nuclear powers. *(Hardback, 344 pages)*

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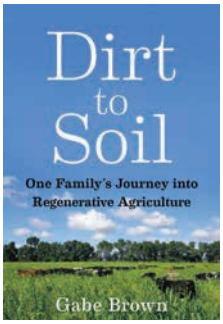

NEW

DIRT TO SOIL

Gabe Brown

Soil health pioneer Gabe Brown recounts his journey into regenerative agriculture – a journey that began after a series of weather-related crop disasters that put the Brown family farm on the brink of financial ruin. In response, Gabe experimented with a new method of farming that would bring life back to the farm. He concluded that the future is regenerative, no-till, organic farming.

Dirt to Soil advocates for the betterment of the food we consume and the state of our shared planet. *(Paperback, 240 pages)*

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COASTAL CARDS

A beautiful pack of 4 greetings cards featuring artwork by Andy Lovell. Blank inside for your own message. Four cards with envelopes per pack, two of each card: Polly Joke, Cornwall and Widemouth Bay, Cornwall. These cards are printed by The Resurgence Trust.

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CARDS FOR LIFE

Cards for Life is a tool for transformation, a community of practice and a set of digital resources wrapped into a practitioner pack to help you put life at the centre of your personal development and professional work. You are invited to step beyond the outdated mechanical models of how change happens in the world and join a growing movement of dynamic regenerative cultures, shifting focus from objects to relationships, helping us to reconnect both self and world, humans and Nature.

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Resurgence

SUMMER CAMP

A celebration of connection, community and change

11 – 13 July 2025

Experience Resurgence Summer Camp - a weekend of inspiring talks, workshops, music, storytelling, poetry, craft, community and delicious food.

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Tickets limited to 140 so book soon to avoid disappointment!
Onsite camping, bell tents and yurts available from Green and Away.
Find out more: www.resurgence.org/summercamp | info@resurgence.org

This event is a fundraiser for The Resurgence Trust, an educational charity (no. 1120414).

Illustrations by Linda Scott Instagram @lindascottillustration

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Nov/Dec	5 September
Jan/Feb	5 November
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"The Resurgence Trust is dedicated to the wellbeing of the Earth, for now and forever which includes the wellbeing of ourselves, of all people, and of future generations."

Satish Kumar, Editor Emeritus,
Resurgence & Ecologist

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To find out more and book, visit:

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Photograph: Mark Gough

Intertwined

EXHIBITION

20 - 29 May 2025

Helix Nature Art and Stephen Raff Photography present a joint exhibition of Nature-inspired art and photography. Together these two artists showcase their love for Nature and its cycles, with monochrome art and imagery intertwined with life and mindfulness.

OPEN DAILY 10AM–3PM
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For more information:
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Helix Nature Art


Stephen Raff Photography

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The Resurgence Trust is an educational charity and global community that connects, informs and inspires positive change by honouring the interdependence of the Earth, the self and all living beings.

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PRODUCTION

Printed by Deltor Communications Ltd on FSC® ceritified paper derived from mixed sources

Resurgence & Ecologist (ISSN 0034-5970) is published bi-monthly by The Resurgence Trust, a company limited by guarantee registered in England and Wales (05821436) and a charity registered in England and Wales (1120414).
Registered office: The Resurgence Centre, Fore Street, Hartland, Bideford, Devon EX39 6AB, UK