

## *Extinction: who cares?*

*A long-read essay marking the publication of Framing Nature – conservation and culture*

*21 September 2020*

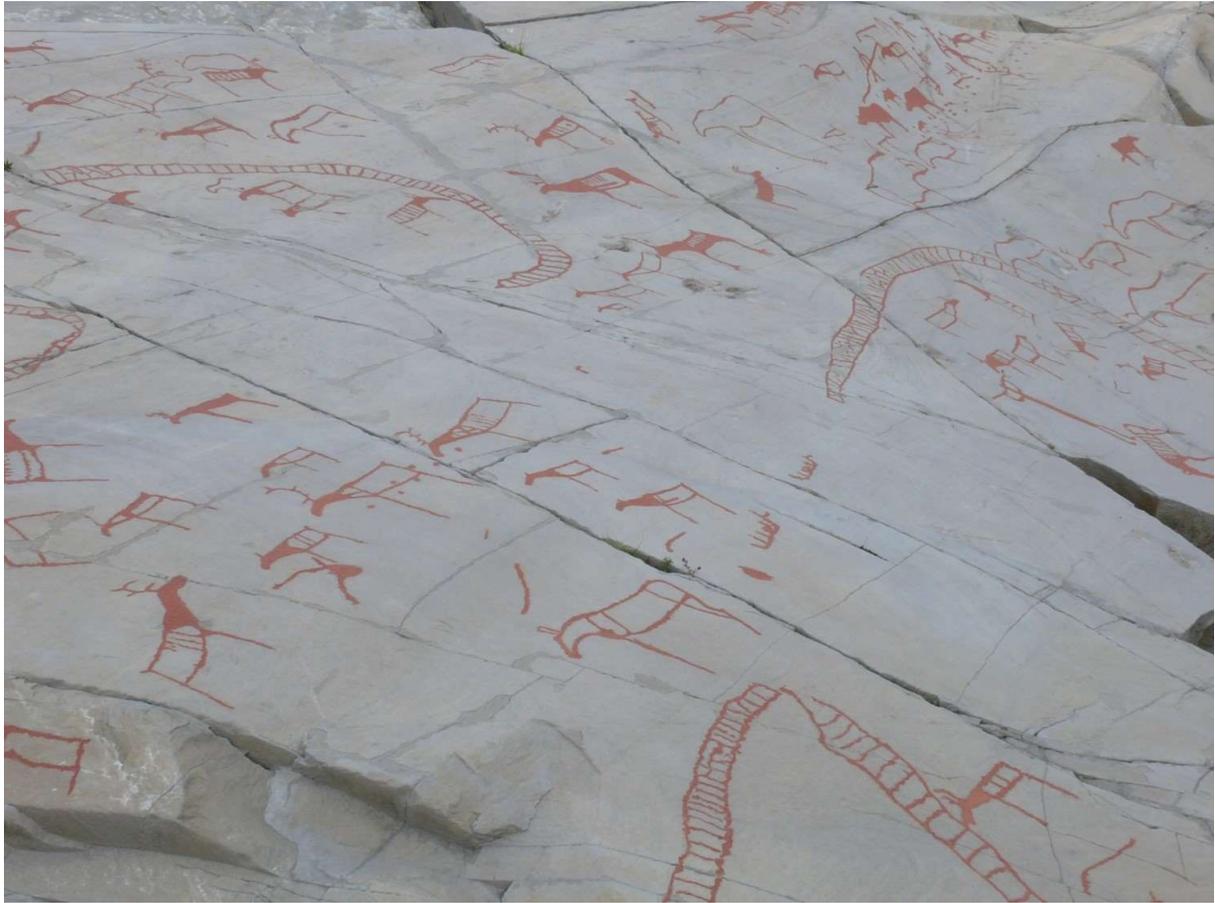
*Laurence Rose*

At the end of May 2016 I reached 70° 43'N, at sea off Molvik Point in North Norway, having crossed Europe from the south, tracking the spring season as it made its own way north. I was writing as I went, and as I reached the most northerly point in my journeys, I was searching for some final inspiration, an idea for ending a book that had been taking shape over the previous four months. Before I turned back south, I visited a place that goes by the Sámi name of Jiepmaluokta, Bay of Seals, near the small town of Alta. There, I found my answer:

There is a great, hump-backed rock lying stranded in front of me. Its back was scarred over thousands of years by glacial scraping, then soothed at the water's edge when the ice retreated, reducing its wounds to fine lines like the pleats in a whale's maw. It was lifted from the sea by isostatic rebound, the rising of the land freed from the pressure of a mile-thick ice-cap. It now lies a hundred feet above the shore, its body barnacled by lichen, half-sunk into the soil that still grows imperceptibly deeper each year under a shagpile of crowberry, cloudberry and bog bilberry. The path I am on runs past this rock and winds down to the left. Each step down the path to the sea represents a decade or two along a timeline of changes that began about 14,000 years ago, when the ice started to withdraw from this coast. Two or three thousand years later, the fjords were ice-free. Another millennium or two on, about 10,000 years ago, the perennial ice had gone from all of northern Norway.

That first rock to have risen from the depths was naked of any human inscription, but four metres nearer to sea-level, I arrived at another group of massive, sea-smoothed rocks. They had emerged from the waters about a thousand years after the stranding of the hump-back, between 6,000 and 7,000 years ago. By then, people had arrived. They chiselled images into the fine-grained, grey-green sandstone: reindeer, moose, whales, bears and people. Archaeologists believe the images were created at the edge of the sea, 25 metres below their present-day position. Then, the rocks would have been dyed red, like the ones on today's shoreline, where

the salt spray reacts with the rock surface to produce a natural red coating. The glyphs would have reflected almost white.



Rock pictograms, Jiepmaluokta, Alta, Norway © Laurence Rose

To walk that path was to travel in time, downhill to the present. The next rock, lying about twenty metres above the shore, emerged from the sea between 4200 and 5300 years ago. There were ghosts on this rock: great auks, four of them.

In the guide-book to the site they are wrongly labelled as “probably geese”, but there can be no doubt as to their true identity. There are geese there, too, but the auks have stouter bills, shorter necks, upright postures; one is flapping its paddle-wings, quite de-adapted for flight, and has a man’s hand round its neck. It is a huge bird caught by a



small stone-age man. It is either a very bad drawing of a goose or a pretty good one of the extinct great auk.

I almost had the feeling of having made a re-discovery, as if the great auk were not extinct after all. I felt their presence in the past of that place, and I felt I knew something of the stories of the auk-hunter and his people as if the rocks were the pages of a graphic novel. Perhaps they were.

By the mid-1500s great auks were already almost extirpated from the eastern Atlantic, where their colonies were regularly ravaged for their thick down. In July 1840, Britain's last great auk was captured on the remote islet of Stac an Armin, St Kilda. As they became rarer, their skins became collectable and their eggs highly prized. The last known breeding pair anywhere was found incubating an egg on Eldey island, Iceland on 3 June 1844; they were killed to order at the request of a dealer. Eight years later, the last known, lone, great auk was seen briefly on the Grand Banks of Newfoundland.



It is a sad tale, made harrowingly so by its timing. In the so-called western enlightenment that was emerging in the 1700s, the idea that extinction was even possible was denied by the prevailing orthodoxy at the time, that all life occupied its place in a great, unbreakable chain of being. In the last two decades of the great auk's existence that view was changing, as more and more fossil remains of otherwise unknown species were being uncovered. As explorers revealed more of the planet and the apparently endless wealth of its extant biodiversity, belief in the existence of lost worlds inhabited by the living relics of fossil species evaporated away.

Gradually, the realisation that we had the power to undo what was still widely seen as God's work, led to the first modern conservation responses. The new thinking was captured in writings such as American diplomat George

Perkins Marsh's *Man and Nature: Or, Physical Geography as Modified by Human Action*. Published in 1864, it challenges the myth of the inexhaustibility of the earth's resources.

The UK's Sea Birds Preservation Act 1869 was one of the first pieces of conservation legislation anywhere in the world. It resulted from a campaign by local clergy and naturalists to save the birds of Flamborough Head, Yorkshire, which were declining severely as a result of hunting and egg-collecting for food. It was enacted within living memory of one seabird they were too late to save. Had the great auk hung on another few decades, it might still be with us today, perhaps even restored as a relatively common bird.



A year after completing my spring journeys I returned to the north, as far as Orkney at any rate, with an idea for another book, inspired by the still-fresh memory of discovering the auks. More than four thousand years ago, on South Ronaldsay there was a community who might well have called themselves the White-tailed Eagle people. If, as some suspect, they totemised the great bird, they likely took for themselves the name, now long-lost and unknowable, that they gave to the white-tailed eagle. It was a bird that had a utilitarian and, almost certainly, a spiritual role. Scavenging on the flesh of human dead, they aided the pre-burial process of excarnation. As



Andrew Astbury/Shutterstock

the bird whose wings were broadest in span and whose soaring swept it to the greatest heights, perhaps they could also consume a person's soul and carry it into the heavens. In a tomb constructed a thousand years earlier, the people interred the bodies of dead eagles, placing collections of talons alongside the remains of the most prominent human members of their clan.

Whatever stories they told to accompany their rites and guide their daily lives, there must have been a deeper connection to the rest of nature than anything our teachings, values or lived experience can equip us to understand, here in contemporary Britain. Something that had the power to cement a people to place, and thence to the natural resources and relationships that sustain life. Over the next 3000 years, the eagles appear to have retained some hold over northern societies, enjoying special status for the Picts of Orkney and mainland Scotland, as well as for the Christians of Saxon Northumbria.

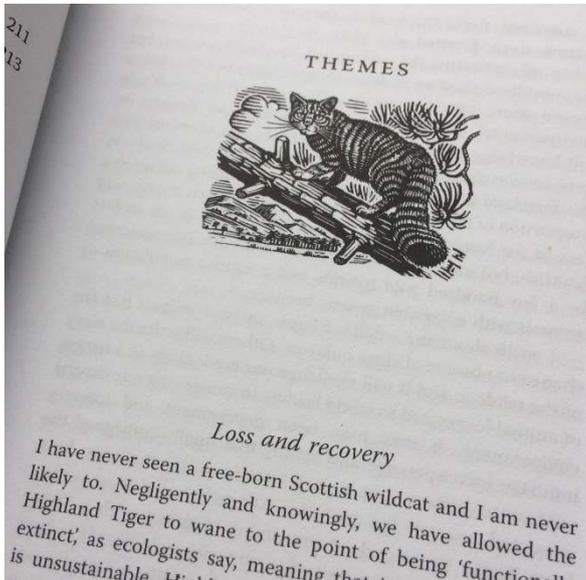
Yet still the species was exterminated from Britain by the deliberate efforts of later generations who laboured at the task for as long as 800 years. It was finally achieved with the shooting of the last eagle in 1918 amid objections and laments that came too late. In Norway, officially incentivised schemes to eradicate the eagles continued until as late as 1969. If the decline towards oblivion of the great auk was unfortunate in its timing, then the survival of the white-tailed eagle is due to extermination efforts having failed to fully realise their goal by the time public consciousness was turning in favour of preserving the diversity of life on Earth. Later in the 20<sup>th</sup> century a second 180-degree turn in society's attitude to eagles, albeit with loud voices of dissent raised by a small but influential minority, provided a platform for their reintroduction.



Three years and twelve essays later I had a book that explores our relationship with other species through their own stories – those of the eagles, and of eight other animals, from ants to otters to nightingales. A final three essays try to make sense of the state of nature as a whole, reflecting on what those nine species have to say to us, about us. After nearly 40 years in the conservation profession I was, I think, taking stock, and found myself – like all conservationists, an optimist at heart – juggling the contrasting emotions of hope and despair in wildly varying combinations.

At the beginning of 2020, the wildcat was declared functionally extinct in Britain. I had already anticipated this in the very first words of my book, then still in draft, and decided to leave the opening unchanged:

I have never seen a free-born Scottish wildcat and I am never likely to. Negligently and knowingly, we have allowed the Highland Tiger to wane to the



point of being 'functionally extinct', as ecologists say, meaning that its small population is unsustainable. Highland Tiger is a new name, coined by conservationists desperate to muster public support for an animal that has been pushed far closer to the brink of extinction than the real tiger ever was. The real tiger came close enough, but

when its main populations – in the Indian Subcontinent, Sumatra and Siberia – reached critically low points in the 1970s, governments intervened with hunting and trade bans and dedicated tiger reserves. It hasn't worked perfectly, but it has worked. At that same time, in the UK the last refuges of the wildcat were being desecrated with government support. Long absent from the great expanse of moorland above the treeline, they were confined to the narrow, steep, forested glen sides. By then the government policy of eradicating the wildcat had long been revoked; but the subsidised planting of dense monocultures of Sitka spruce proved more effective anyway. We watched an avoidable environmental disaster unfold and continue for decades in full knowledge of its impact. The wildcat was squeezed into ever-smaller fragments of mixed forest, or pushed closer to the farmland fringe, where successive generations acquired a proportion of farm cat genes, rendering them both impure and less fit for forest life. Today the wildcat, which is not in fact Scottish, but once roamed across Great Britain, is represented by a few hundred wild hybrids and a captive population of animals with a variable genetic heritage.

I write about the wildlife I know, drawing on first-hand experience, so the wildcat played no further part in my stock-take. Instead I told the story of species conservation through nine others. The white-tailed eagle shows that local extinctions can be rewound and the species reintroduced, if the right conditions have been restored and public support regained. The corncrake has a scientific detective story to tell, in which the solution to its demise is found in the nick of time, preventing its almost certain extirpation from Britain and Ireland. Translocating field crickets and whole nests of narrow-headed ants shows the detailed knowledge, ingenuity and resolve that is needed to turn around the plight of invertebrates. The fox and, especially, the badger show us that there remains some deep dysfunction in our relationship with nature, however. Much of our protective legislation is in practice about managing wildlife as a problem, rather than finding new patterns of coexistence and harmony.

Hope springs abundantly from the story of the otter. Recent research confirms that otters have almost completely recolonised Great Britain, while polecats have extended their range in southern Britain from Wales, and pine martens have expanded from the Scottish Highlands into the lowlands and on into England. It seems the wildcat in its parlous state is the exception among Britain's predatory mammals, which are otherwise bouncing back from the critical levels they had reached only three or four decades ago. We nearly lost the otter by serving it a lethal cocktail of threats: fur-trapping, sport hunting, persecution, river mismanagement, habitat fragmentation, direct and diffuse pollution, toxic pesticides and starvation. It is now found in the centres of a dozen cities and along hundreds of stretches of river and coastline.



Nick Edge/Shutterstock

The comeback was gradual. England's rivers were being cleaned up after nearly two centuries of industrial and urban pollution and half a century of agricultural run-off, the effects of which have recently come to light. A [study](#) published in February 2020 examined long-term distribution trends in over 5000 species in 31 different taxonomic groups. A varied array of 318 freshwater species experienced a strong decline in the UK between 1970 and the mid-1990s and since then has recovered back to 1970 levels. While this is a measure of distribution (based on occupancy) and not abundance, it would suggest that freshwater wildlife has been recovering after a period of serious decline.

As fish returned to previously sterile watercourses, and with legal protection against hunting and persecution, otters began to spread back into England from their strongholds in Devon and the Welsh border lands. They are now to be found in once-dead rivers running through cities, brought back to life through a clean-up overseen by the Environment Agency. Otters live contentedly in Stoke-on-Trent, Reading, Exeter and Leeds, as well as in many smaller towns like Thetford and Winchester.

The week before *Framing Nature – conservation culture* is published, the Environment Agency's four-yearly [report](#) on the EU water framework directive, legislation intended to drive up river water quality across Europe, shows there has been no improvement in the state of

## Rivers

# Shocking state of English rivers revealed as all of them fail pollution tests

**Data reveals just 14% of good ecological standard and none of good chemical standard**

Sandra Laville

Thu 17 Sep 2020 11.43 BST



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▲ Data reveals just 14% of English rivers are of 'good' ecological standard. Photograph: David Levene/The Guardian

All English rivers have failed to meet quality tests for pollution amid concerns over the scale of sewage discharges and agricultural and industrial chemicals entering the water system.

Data published on Thursday reveals just 14% of English rivers are of good ecological standard, a rating that suggests they are as close to their natural

English rivers since 2016 when the last data were published. Pollution from raw sewage discharges by water companies directly into rivers, chemical discharges from industry, and agricultural run-off are key sources of pollution, according to the data. The implications for the otter's continued success have not been assessed, but must be a cause for concern.



If, to cite Emily Dickinson, hope is the thing with feathers, then one bird epitomises the remaining lines of that first stanza, *that perches in the soul – and sings the tune without the words – and never stops – at all*. But in Britain at least, the rapidly-declining nightingale would



seem to be a bird without hope, and as one that has itself inspired hundreds of thousands of lines of poetry, were we to lose it, it would constitute an immeasurable cultural bereavement. Yet hope there is, and it comes not from the long, patient, resolute application of orthodox conservation principles. Indeed, the contemporary story of the nightingale confirms the inadequacy of our established conservation model in saving species that dwell primarily in the human landscapes of farmland and traditional forestry. With its most important site, Lodge Hill in Kent, theoretically

protected but repeatedly earmarked for development, the species' future seems bleak. But new conservation thinking coming largely from outside the mainstream organisations (and well outside government) has led to a return of many previously declining species into tracts of land not conventionally designated and managed for nature.

In her celebrated book *Wilding*, Isabella Tree described her experience of letting Knepp Castle, the Estate she runs with her husband Charlie Burrell, run wild. Led by what Tree describes as “an amateurish love for wildlife and because we would have lost an impossible amount of money

if we had continued to farm” they re-thought the business as “a biodiverse wilderness in the Low Weald of West Sussex”. The project started simply, leaving the less productive fields in the southern part of the estate to lie fallow. Then from 2010 the whole estate was entered into Higher Level Stewardship, the UK government scheme that, under the auspices of the EU agri-environment programme, granted payments for every hectare or linear metre of wildlife-friendly habitat created.

By then nightingales had apparently disappeared from Knepp, in line with the national trend that has seen 90% lost since 1970, but in 2012 researchers from Imperial College London recorded 34 territories. They had returned, and perhaps uniquely, were increasing in the face of the national decline. So-called wilding or rewilding initiatives are challenging traditional approaches to conservation and offering an exciting – because unpredictable – new relationship with the nation’s core natural asset, the land itself.

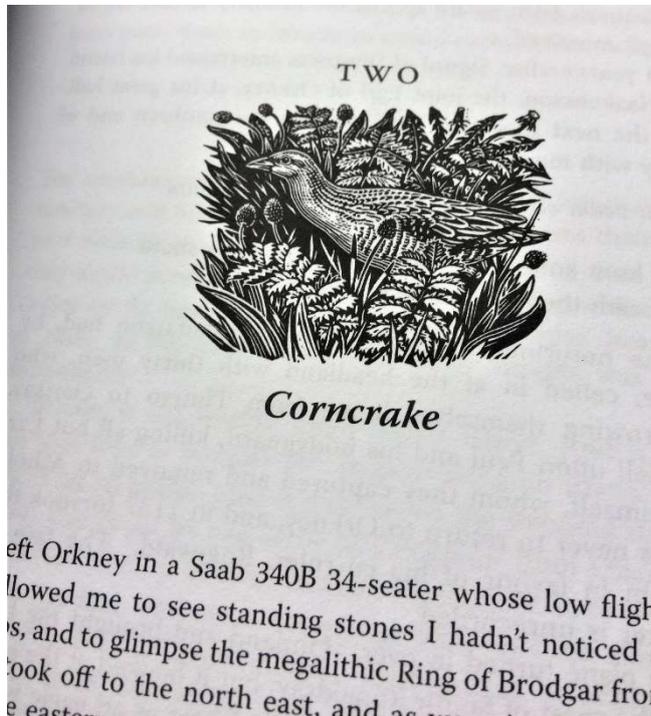


I started working in conservation in 1983, when a few previously lost or vanishing species, like avocets and ospreys, were steadily re-establishing themselves, and a sense was emerging that loss was reversible. This was two or three years before what, looking back, I now think of as a pivotal moment in conservation history. In the mid-1980s disturbing patterns emerged from the data being gathered by amateur ornithologists in what today we would call citizen science projects. Birdwatchers’ daily experience was beginning to show us that many birds were in decline. The figures from the Common Birds Census and its later version the Breeding Bird Survey allowed the trends to be quantified, and showed clearly that the number of species in decline far outweighed the number increasing; and birds associated with farmland were decreasing much faster than the underlying trend for birds as a whole.

Common birds like the skylark and the song thrush were suddenly a cause for concern. The later addition to the priority list of the house sparrow and the starling – the last two species I would ever have expected to have to worry about – signalled a widespread environmental crisis. As the years wore on, the list of familiar, everyday, much-loved species added to the official catalogue of Birds of Conservation Concern continued to grow. In due course, specialists in other areas added their data and were able to confirm what we knew in our hearts, that the increasingly desperate plight of birds signified a malaise that ran through all wildlife. Hundreds

of species of all kinds, from glow-worms to adders, wall butterflies to hedgehogs, once familiar and unremarkable, have become rare and sought-after within a single human generation.

I chose the corncrake as one of my essay subjects because with hindsight we know that the crash in its population that occurred between about 1900 and 1960 was an early warning of a wider



catastrophe to come, centred around the plight of wildlife in the farmed environment. The curlew was another species that seemed to be draining away from Britain, as if England's south-west peninsula were the funnel through which they were disappearing from across the southern half of England, across which they once ranged. The 'corncrake formula' of intensive research to understand exactly what the buntings needed but could no longer enjoy, experimentation to see if local gains could be made, rolling out solutions to other participating farms, and

establishing payment schemes to encourage the often minor changes that were needed for the species to recover, was applied. It worked. From a low point in 1989 when just 119 pairs survived, all of them in south Devon, Britain's curlews reached the milestone of 1000 pairs in 2016, enough to provide a source of captive-bred birds for reintroduction into Cornwall, where there are now over 50 pairs.

Corncrakes and curlews became so rare and threatened that any small-scale success from highly targeted measures was bound to make the graph leap upwards. The greater challenge is to make wide swathes of farmland hospitable once more to the species that may still be widespread and even relatively common, but which are declining fast. These are everyone's birds, the birds we associate with our childhoods, the ones we celebrate in anthologies, the birds that provide the soundtrack to our lives: lapwing, curlew, linnet, skylark, starling, kestrel, yellowhammer.

Turtle dove. Only two per cent of the 1970 population remains, making it the fastest declining of all British birds. The tragedy of this most beloved of summer sound-makers is its double

jeopardy. It has the misfortune to belong to two disadvantaged classes, being both a farmland bird and a long-distance migrant. The next corncrake.

Where, then, is hope to be found? The corncrake and ciril bunting are among a few examples of generalist countryside wildlife being rescued from oblivion, all involving species that had become so extremely rare as to come to be regarded as range-restricted specialists, treated in intensive care at great expense. Earlier this month a [study](#) was published suggesting that globally, extinction rates for birds and mammals would have been three to four times higher since 1993 without such dedicated care. The Iberian lynx, California condor and pygmy hog are among animals that would have disappeared without reintroduction programmes, zoo-based conservation and formal legal protections, scientists at Newcastle University and BirdLife International found. The baseline of 1993 was chosen because that is when the [UN Convention on Biological Diversity](#) (CBD) came into force, obliging the governments of the world to work to prevent extinctions.

Since then, 15 bird and mammal species are known or suspected to have become extinct, but the study found between 21 and 32 bird extinctions had been prevented and that between seven and 16 mammals had been saved. They include the Puerto Rican amazon, a small parrot that had dwindled to only 13 wild individuals in 1975, and was saved from extinction by a reintroduction programme boosted by captive-bred birds. The original group was wiped out by Hurricane Maria in 2017.

Overall, however, successive ten-yearly waves of target-setting and reporting under the auspices of the CBD have served to reinforce the causes for despair and strain any reserves of hope. What is conservation getting wrong?

In September 2019 the Luc Hoffmann Institute, a research body set up by the Worldwide Fund for Nature, convened a meeting in Vienna, attended by 70 academics, professionals and researchers to answer that question. Top of the list of reasons why conservation was failing were neo-liberal policies that encourage the over-consumption of resources; the financial starvation by governments of their conservation agencies; subsidies for energy industries, and free rein for agriculture and mining to expand into even the remotest places.

The timing of the meeting for late 2019 was not random. In 2002 the world's governments, as signatories to the Convention had set out to *achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to*

*poverty alleviation and to the benefit of all life on earth.* Acknowledging that the aim was probably never likely to have been realised, the 2010 Conference of the Parties to the convention drew up a new strategy for 2011–2020. More sophisticated, more detailed, and more focussed on specific goals, it did away with the one-line proclamation of some grandiose aim. Instead, the Parties adopted twenty targets (the so-called Aichi Targets, after the Japanese prefecture in which they were drawn up) which were to contribute to five strategic goals. The goals were to address the causes of biodiversity loss, to reduce pressure on biodiversity, to improve the status of biodiversity, enhance the benefits to all of biodiversity, and to enhance implementation through participation. When the goals are broken down into the twenty targets, the nature of the ambition becomes clear. They all begin with the words “By 2020 ...” and include:

...incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts (target 3)

...the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero (target 5)

...all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem-based approaches, so that overfishing is avoided (target 6)

...areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity (target 7)

...the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained (target 12)

The pattern is a familiar one: in 2002, the governments of the world – led by the capitalist west – decide to face down the forces of global capital in the interests of the home planet and its poor. They fail, and reset the clock, adding another ten years to the timescale – to 2020 – and fail again. These failures were not close calls, just falling short, but comprehensive, outright, abject debacles.

Another conference was due to take place in Kunming, China in October 2020, but has been postponed in the wake of the Covid-19 crisis. Meanwhile, a preliminary draft strategy has been

prepared. This includes a 2050 vision, five overarching goals for 2030 and for 2050, and 20 action targets for 2030. Serial political failure is the surest symptom of cultural indifference to biodiversity loss; early signs suggest that a further decade of miserable performance is already being pre-empted with a ready-made new set of goalposts.



I wrote 90,000 words to try to understand why we seem no farther forward in the quest for a stable, harmonious natural world of which we can be part. As each of my nine stories unfolded, at the same time crystallising into a single narrative of loss tinged with hope, I kept returning to the same few questions, and realised they were questions about culture: the cultural values of society at large, culture clashes between irreconcilable interests, and the culture of conservation itself. The central question is about loss: why do we allow such a scale of biodiversity loss?

My greatest fear is that we are becoming desensitised to the loss of nature. The point of global extinction – or of local extirpation – of a species is almost invariably the denouement of a long process of decline over which there is less a grieving, more a resigned acceptance. Can we not at least rage against the dying of the light?

The challenge for the conservation movement is to create in society a sense of urgency and crisis about something as insidious as the thinning-out of nature. There is no 9/11 moment in conservation that stories can coalesce around: “where were you when the last Yangtze river dolphin died?” doesn’t quite work.

The nearest we have come, so far, to experiencing any collective shock wave is in losing over 100 million vultures in South Asia in the ten years between 1993 and 2002. (See [Vulture, Lion, Cow, Cowherd](#), the first in this series of long-read essays.) In thousands of towns and villages across India, Nepal, Pakistan and Bangladesh, where once over 100 million white-backed, Indian, slender-billed and red-headed vultures provided the fastest and cleanest carrion disposal system in the world, there is now a glut of dead meat. From the first official recognition of the problem, there followed the fastest decline to the brink of extinction ever recorded: in the case of the white-backed vulture, 99.7% of its population disappeared in the ten years between 1993 and 2002, with further decline since. There was a frantic need to deploy global ecological and veterinary expertise to find the cause. Eventually, the culprit was found to be renal failure caused

by the birds' rapid accumulation of the veterinary (and human) drug diclofenac, which was found to be poisonous to vultures.



Slender-billed vulture, Nepal © Laurence Rose

Following the realisation that diclofenac – a class of drug known as NSAID or non-steroidal anti-inflammatory drug – was causing the vulture crash, steps were quickly taken to avert a horrific extinction. The drug was banned for veterinary use in India on 11 March 2006; Nepal followed suit in August 2006, and Pakistan shortly thereafter. A replacement drug, meloxicam, was quickly developed and found to be safe after tests were carried out on vultures in captivity. Global solidarity of the kind promoted by the CBD was, however, unforthcoming. Several European governments have taken a backward step and licenced veterinary diclofenac, including Spain, home to 90% of Europe's griffon vultures. Conservationists from South East Asia to Southern Africa, as well as in Europe itself, have called on Europe to urgently address its own impending vulture crisis.

We must never forget that all extinctions start with the first local loss; and that the moment of global extinction is also local, somewhere.

This essay is based on edited excerpts from Laurence Rose's books [\*The Long Spring\*](#) (great auk) and [\*Framing Nature – conservation and culture\*](#), published on 21 September 2020.

Chapter heading linocuts are by [Richard Allen](#).