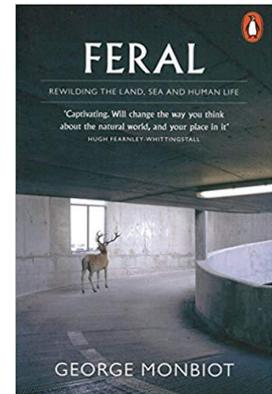


George Monbiot Feral : Rewilding the Land, Sea and Human Life

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1. **Raucous Summer** – what does a natural landscape look like?

Over the past few decades, ecologists have discovered the existence of widespread trophic cascades. These are processes caused by animals at the top of the food chain, which tumble all the way to the bottom. Predators and large herbivores can transform the places in which they live. In some cases they have changed not only the ecosystem but also the nature of the soil, the behaviour of rivers, the chemistry of the oceans and even the composition of the atmosphere. These findings suggest that the natural world is composed of even more fascinating and complex systems than we had imagined. They alter our understanding of how ecosystems function and present a radical challenge to some models of conservation. They make a powerful case for the reintroduction of large predators and other missing species.

While researching this book I have, with the help of the visionary forester Adam Thorogood, stumbled across an incendiary idea that seems to have been discussed nowhere but in a throwaway line in one scientific paper.¹ I hope it might prompt a reassessment of how our ecosystems function, and of the extent to which they are perceived as natural. There is, we believe, powerful circumstantial evidence suggesting that many of our familiar European trees and shrubs have evolved to resist attacks by elephants. The straight-tusked elephant, related to the species that still lives in Asia today, persisted in Europe until around 40,000 years ago, a mere tick of evolution's clock. It was, most likely, hunted to extinction. If the evidence is as compelling as it seems, it suggests that this species dominated the temperate regions of Europe. Our ecosystems appear to be elephant-adapted.

Even so, I have no desire to try to re-create the landscapes or ecosystems that existed in the past, to reconstruct - as if that were possible - primordial wilderness. Rewilding, to me, is about resisting the urge to control nature and allowing it to find its own way. It involves reintroducing absent plants and animals (and in a few cases culling exotic species which cannot be contained by native wildlife), pulling down the fences, blocking the drainage ditches, but otherwise stepping back. At sea, it means excluding commercial fishing and other forms of exploitation. The ecosystems that result are best described not as wilderness, but as self-willed: governed not by human management but by their own processes.*Rewilding has no end points, no view about what a 'right' ecosystem or a 'right' assemblage of species looks like. It does not strive to produce a heath, a meadow, a rainforest, a kelp garden or a coral reef. It lets nature decide.

The ecosystems that will emerge, in our changed climates, on our depleted soils, will not be the same as those which prevailed in the past. The way they evolve cannot be predicted, which is one of the reasons why this project enthalls. While conservation often looks to the past, rewilding of this kind looks to the future.

The rewilding of both land and sea could produce ecosystems, even in such depleted regions as Britain and northern Europe, as profuse and captivating as those that people now travel halfway around the world to see. One of my hopes is that it makes magnificent wildlife accessible to everyone.

I mentioned that there are two definitions of rewilding that interest me. The second is the rewilding of human life. While some primitivists see a conflict between the civilized and the wild, the rewilding I envisage has nothing to do with shedding civilization. We can, I believe, enjoy the benefits of advanced technology while also enjoying, if we choose, a life richer in adventure and surprise. Rewilding is not about abandoning civilization but about enhancing it. It is to 'love not man the less, but Nature more'.

The consequences of abandoning a sophisticated economy, supported by high crop yields, would be catastrophic. Before farming began in Britain, for example, these islands appear to have supported a maximum of 5,000 people.⁹ Had they been evenly dispersed, each person would have occupied 54 square kilometres, an area slightly larger than the city of Southampton (which now houses 240,000 souls). This, it seems, was as many people as hunting and gathering could sustain. (Even so, Mesolithic men and women severely reduced the numbers of large animals.) The fantasy entertained by some of the primitivists I have met, of returning to a hunter-gatherer economy, would first require the elimination of almost all human beings.

¹ Quoting Oliver Rackham!

For the same reason I do not think that extensive rewilding should take place on productive land. It is better deployed in the places - especially in the uplands - in which production is so low that farming continues only as a result of the taxpayer's generosity. As essential services all over Europe (and in several other parts of the world) are cut through want of funds, farm subsidies in their current form surely cannot last much longer. Without them, it is hard to see how farming in these places can be sustained: for good or ill, it will gradually withdraw from the hills.

Some people see rewilding as a human retreat from nature; I see it as a re-involvement. I would like to see the reintroduction into the wild not only of wolves, lynx, wolverines, beavers, boar, moose, bison and - perhaps one day in the distant future - elephants and other species, but also of human beings. In other words, I see rewilding as an enhanced opportunity for people to engage with and delight in the natural world.

Feral also examines the lives we may no longer lead and the constraints - many of them necessary - that prevent us from exercising some of our neglected faculties. It explains how I have sought, within these constraints, to rewind my own life, to escape from ecological boredom. I am surely not alone in possessing an unmet need for a wilder life, and I suggest that this need might have caused a remarkable collective delusion, from which many thousands of people now suffer, that seems to be an almost perfect encapsulation of the desire for a fierce, less predictable ecosystem.

If you are content with the scope of your life, if it is already as colourful and surprising as you might wish, if feeding the ducks is as close as you ever want to come to nature, this book is probably not for you. But if, like me, you sometimes feel that you are scratching at the walls of this life, hoping to find a way into a wider space beyond, then you may discover something here that resonates. Pp9-11.

8. A Work of Hope – would there have been big animals in Europe?

We cannot always be sure which factor was most important in the disappearance of an ancient species. Some of them would have been affected by both climate change and hunting. So we must make educated guesses, comparing the survival of the horse and the reindeer, for example, to that of other hunted species, such as the moose, the aurochs and the red deer, which lasted much longer. The question of whether horses and reindeer disappeared because the grasslands turned to forest or the grasslands turned to forest because horses and reindeer disappeared is also hard to resolve. But even those who conducted the research proposing that the northern Siberian steppes turned to tundra because the grazing animals were killed by hunters suggest that the southern steppes turned to forest for climatic reasons. Nor do we have definitive extinction dates, as the fossil record is far from complete.

My aim here is to expand the range of what we consider possible, to open up the ecological imagination. That requires some understanding of palaeoecology. The fact that sometimes eludes biologists and naturalists, steeped in the present, is that every continent except Antarctica possessed a megafauna.

When I studied zoology at university, I read a number of accounts, founded on ecology and physiology, which tried to explain why very large animals live in the tropics but not in temperate nations. I found them interesting and in some cases persuasive. But, like the authors of these speculations, I had missed something. The inherent difference they sought to explain did not exist. Until very recently, large animals lived almost everywhere, often in great numbers. They could do so today: African lions have been living and breeding in outdoor enclosures in Novosibirsk zoo in Siberia since the 1950s. Large animals appear, in most parts of the world, to have been hunted to extinction by people. These species have been excluded from temperate regions not by any natural ecological or physiological constraints, but by humans.

With the possible exceptions of Australia's and Madagascar's, none of these megafaunas has the capacity to amaze as much as that of the Americas. Alongside mammoths of several species (including one that dwarfed the woolly variety), mastodons, four-tusked and spiral-tusked elephants, lived an improbable bestiary of other massive herbivores. There was a beaver (*Castoroides ohioensis*) the size of a black bear: eight feet from nose to tail, with six-inch teeth. There was a giant bison (*Bison latifrons*) whose bulls weighed two tonnes, stood eight feet at the shoulder and carried horns seven feet across. Shrub oxen (*Euceratherium collinum*) and musk oxen inhabited the entire northern continent. (Neither of them are really oxen: they are closely related to sheep and goats, but very much larger.) In South America there was a giant llama (*Macrauchenia*) whose face ended in a trunk.. There were armadillos - glyptodonts, such as *Glyptodon* and *Doedicurus* - the size of small cars, armoured with a bony carapace like a tortoise's. Ground sloths - such as *Megatherium* and *Eremotherium* - the weight of elephants stood twenty feet on their hind legs, and used their formidable claws to pull down trees.

The great American lion (*Panthera leo atrox*), one of the largest cats ever to have existed, was almost sweet by comparison to the terrifying *Smilodon populator* - the giant sabretooth cat - which weighed as much as a brown bear, hunted in packs and possessed fangs a foot long. The short-faced bear (*Arctodus siinus*) stood thirteen feet in its hind socks; the Riverbluff Cave in Missouri has scratch marks made by its claws fifteen feet from the floor. One hypothesis maintains that its astonishing size and shocking armoury of teeth and claws are the hallmarks of a specialist scavenger: it specialized in driving giant lions and sabretooth cats off their prey.

The North American roc (*Aiolornis incredibilis*), had a wingspan of sixteen feet and a hooked bill the length of a man's foot. No skull of another predatory bird, the Argentine roc (*Argentavis magnificens*) has yet been found, but the available bones suggest that its wings were twenty-six feet across and that it weighed twelve stone. On the Pacific coast, sabretooth salmon (*Oncorhynchus rastrosus*) nine feet long migrated up the rivers.

All these remarkable beasts disappeared at around the same time, generally between 15,000 and 10,000 years ago. Their extinction coincides with the arrival and dispersal of the first technologically sophisticated people in the hemisphere: hunters using finely worked stone weapons. The evidence suggests that it was not, as many palaeontologists first supposed, primarily climate change that wiped out the American megafauna: it had survived massive fluctuations in the (recent past, and the habitats that many of the missing species require still exist. They were hunted to extinction.

The animals of the New World had never encountered humans before except perhaps some scattered bands with basic technologies. So, like the unfortunate beasts of the islands discovered by Europeans, they probably stood and watched, without fear, as the hunters approached.

Had the Mesolithic people of the Americas eaten everything they killed, they would scarcely have trimmed the herds of game, so small were their numbers. One ground sloth could have fed a clan of hunters for months. The speed with which the megafauna of the Americas collapsed might suggest that they slaughtered everything they encountered. Among those who broke into the New World, anyone could be a Theseus or a Hercules: slaying improbable monsters, laying up a stock of epic tales to pass to their descendants. Like all those who have discovered wildlife in its unexploited state - the sailors who found the dodos in Mauritius or the whales in the southern oceans, the fishermen who first assayed the Grand Banks off Newfoundland - they might have thought the sport would last for ever. Perhaps the care with which some indigenous people of the Americas engage with the natural world came later.

Slaughter of this kind revolts us, but are not most of our great myths on such adventures? Do Ulysses, Sinbad, Sigurd, Beowulf, Cu Chulainn, St George, Arjuna, Lâc Long Quin and Gloomkap not survive in a thousand current tales? All of us have ancestors who, regardless of the continent they inhabited, must have battled with beasts many times their size, armed with horns and tusks and claws and fangs, and must have passed down tales of their triumphs and tragedies, sagas which mutated and evolved across hundreds of generations, but which maintain their essential form today. Are these struggles with the beasts of prehistory not imprinted in our subconscious as surely as Homer's epics were eventually committed to papyrus?

To re-enact these quests, the Romans scoured Africa for monsters to release into their amphitheatres. The Spanish breed black bulls with the temperament of giant aurochs. The Maasai risk long prison terms, mutilation and death to hunt lions. Societies throughout Europe engaged until recently in cruel sports involving bears, badgers, dogs - any creature fierce enough to reawaken the ancestral thrill. The absence of monsters forces us to sublimate and transliterate, to invent quests and challenges, to seek an escape from ecological boredom.

An interesting question arises. Why, when the megafauna was eliminated in the Americas, in Australia, New Zealand, Madagascar and Europe, does it survive, at least in part, on mainland Africa and in some places in Asia? There creatures exist which, were we not familiar with them, would invoke the wonder and incredulity with which we contemplate the glyptodont, the elephant bird and the marsupial Elephants, rhinoceroses, giraffes, hippos, eland, cheetahs, tigers: all of them, had they lived in other parts of the world, would have been - or were - exterminated. The answer is surely that in Africa and then Asia, they evolved alongside hominids and early humans. They learnt to fear the insatiable ape, the diminutive monster which could look back upon its deeds and forward to their embellishment.

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9. Sheepwrecked

Grazing is one of the least productive uses to which the hills could be put. Despite the vast area it occupies and the subsidies it receives, farming in Wales contributes just over £400 million to the economy. Walking, with much lower environmental impacts, produces over £500 million, and 'wildlife-based activity' generates £1,900 million. The National Ecosystem Assessment shows that, across most of the uplands of Wales, switching from farming to multi-purpose woodland would produce an economic gain. In other words, the current model of farming, far from being essential to the rural economy, appears to drag it down. The barren British uplands are a waste in two senses of the word.

All this would be less of our business if we were not paying for it. Hill farming is entirely dependent on subsidies provided by taxpayers. In Wales, the average subsidy for sheep farms on the hills is £53,000. Average net farm income is £33,000. The contribution the farmer makes to his income by raising sheep and cattle, in other words, is minus £20,000.

Farm subsidies cost the United Kingdom £3.6 billion a year. They consume 43 per cent of the European budget: €55 billion, or £47 billion. The British government estimates that the Common Agricultural Policy stings every household in the UK for £245 a year. That is equivalent to five weeks of food for the average household, or slightly less than it lays down in the form

of savings and investments every year (£296). Using our money to subsidize private business is a questionable policy at any time. When important public services are being cut for want of cash, it is even harder to justify.

What do we receive in return for this generosity? The Common Agricultural Policy raises the price of feed, chemicals and machinery, helping to drive the smaller farmers out of business. It raises the price of land, which excludes young people who want to become farmers, and contributes to the rising price of food. This vast expenditure of public funds supports remarkably few people: in the whole of Wales there are just 16,000 full-time and 28,000 part-time farmers. But above all it pays for ecological destruction.

This is not an accident of policy. The rules are quite specific. They are laid down in a European code with the Orwellian title of 'Good Agricultural and Environmental Condition'. Among the compulsory standards it sets is 'avoiding the encroachment of unwanted vegetation on agricultural land'. What this means is that if farmers want their money they must stop wild plants from returning.* They do not have to produce anything, to keep animals or to grow crops there; they merely have to prevent more than a handful of trees or shrubs from surviving there, which they can do by towing cutting gear over the land.

The infamous 'fifty trees' guideline ensures that pastures containing more than fifty trees per hectare are not eligible for funding. A survey by the Grasslands Trust found that this rule excludes farm habitats of great value to wildlife, such as the wooded meadows of Sweden, the limestone pavements of Estonia and the browsed scrubland of Corsica. In Germany, pastures are disqualified from subsidies by the presence of small areas of reeds. In Bulgaria, the existence of a single stem of dog rose has rendered land ineligible. In Scotland farmers have been told that yellow flag irises, which for centuries have gilded the fields of the west coast, could be classed as 'encroaching vegetation', invalidating their subsidy claims. The government of Northern Ireland has been fined £64 million for (among other such offences) giving subsidy money to farms whose traditional hedgerows are too wide. The effect of these rules has been to promote the frenzied clearance of habitats. The system could scarcely have been better designed to ensure that farmers seek out the remaining corners of land where wildlife still resides, and destroy them.

A farmer can graze his land to the roots, run his sheep in the woods, grub up the last lone trees, poison the rivers and still get his money. Some of the farms close to where I live do all of those things and never have their grants stopped. But one thing he is not allowed to do is what these rules call 'land abandonment', and what I call rewilding. The European Commission, without producing any evidence, insists that 'land abandonment in less advantageous areas would have negative environmental consequences'.

To abandon is to forsake or desert. Abandonment is one of those terms - such as improvement, stewardship, neglect and undergrazing - which create the impression that the ecosystem cannot survive without us. But we do not improve the ecosystem by managing it; we merely change it. Across Europe, these rules have turned complex, diverse and fecund ecosystems into simple and largely empty ones. They have helped precipitate an ecological catastrophe.

There is a second tranche of subsidies that pays farmers to undo some of the damage inflicted by this system. It is a crazy use of public funds. First farmers are forced to destroy almost everything; then they can apply for a smaller amount of money to put some of it back.

But only a little. The 'green' subsidies (known as Pillar 2 payments) reward farmers for making marginal changes, and only in certain places. National governments disburse this money, using the European rules as their guidelines. The Welsh government assures farmers that these payments 'will require at most minor modifications to farming systems'. In fact it expressly forbids them to restore more than a few tiny corners of their land.... pp161-62

10. The Hushings

As I mentioned earlier, sheep farmers in the Welsh hills receive an average of £53,000 a year in subsidies while their average net farm income is £33,000. Keeping livestock, in other words, costs them £20,000 a year, though this gap may diminish if the price of lamb continues to rise. But, under the Common Agricultural Policy, if you want your subsidy payment, one of the few things you are forbidden to do is nothing. The Good Agricultural and Environmental Condition rules specify that if you do not keep the land clear, you forfeit everything. There is no requirement to produce anything; you must merely stop the land from reverting to nature, by either ploughing it, grazing it or simply cutting the resurgent vegetation. The purpose is to prevent the restoration of the ecosystem.

So here, perhaps, is the resolution of the conundrum that caused me such trouble: this rule should be dropped. Those farmers who are in it only for the money would quickly discover that they would earn more by lying on a beach than by chasing sheep over rain-sodden hills. Those who, like Dafydd and Delyth, believe in what they are doing, and have wider aims than just the maximization of profit, would keep farming. Where the life and community associated with raising sheep are highly valued, farming will continue. Where they are not, it will stop. Large areas of land would be rewilded, and the farmers who owned it could receive, as well as their main payments, genuinely green subsidies for the planting,

reintroductions and other tasks required to permit a functioning ecosystem to recover. The alternative is the system we have at present: compulsory farming, enforced by the subsidy regime. 180-81

There is, I think, a necessary refinement of this simple idea. At present the subsidy system is deeply regressive. While it is funded by the taxes extracted from everyone, rich and poor, the money is disproportionately harvested by the biggest landowners. This, under the current system, is inevitable, as farmers are paid according to their acreage. According to Kevin Cahill, the author of *Who Owns Britain*, 69 per cent of the land here is owned by 0.6 per cent of the population. It is profoundly wrong, I believe, that people struggling to support their families should be forced to extend alms to dukes, sheikhs and sharks: the absentee landlords, speculators and assorted millionaires who own much of the farmland of Britain and other parts of Europe. 181

12. The Conservation prison

Visit to Glaslyn, a reserve in the Cambrian mountains, feted for its wilderness – which in fact means degraded, overgrazed desert. He talked to the managers and discovered that they have targets set by Countryside Council for Wales, which insists that the owner of the land must keep its 'interest features in favourable condition' – so bog and heath must remain bog and heath even if artificially created. Grouse are one of the key species, kept in vast numbers, on heaths which are burned to accommodate them, ensuring other plants and spp cannot colonise. In order to preserve the result of overgrazing, they must continue to overgraze...

The grazing regime imposed by conservationists in upland Britain - whether they are using sheep, cattle, horses, yaks or pushme-pullyous - bears no relationship to anything found in nature.

What we call nature conservation in some parts of the world is in fact an effort to preserve the farming systems of former centuries. The idealized landscape for many wildlife groups is the one that prevailed a hundred years ago, regardless of the point at which they start counting. This is what they try to preserve or re-create, defending the land from the intrusions of nature. Reserves are treated like botanic gardens: their habitats are herbaceous borders of favoured species, weeded and tended to prevent the wilds from encroaching. As Ritchie Tassel says sardonically, 'You wonder how nature coped before we came along.'

I do not object to the idea of conserving a few pieces of land as museums of former farming practices, or of protecting meadows of peculiar loveliness in their current state, though I would prefer to see these places labelled culture reserves. I do not object to the continued existence of reserves in which endangered species which could not otherwise survive are maintained through intensive management. Nor do I believe that rewilding should replace attempts to change the way farms are managed, to allow more wildlife to live among crops and livestock: I would like to see that happen too. But if the protection of nature is to be extended to wider areas, as both conservationists and rewilders agree that it should be, I believe we should first conduct a radical reassessment of what we are trying to achieve and why. P224

14. Rewilding the Sea

It was then [watching salmon] that I realized that a rewilding, for me, had already begun. By seeking out the pockets of land and water that might inspire and guide an attempt to revive the natural world, I had revived my own life. Long before my dreams of restoration had been realized, the untamed spirit I had sought to invoke had already returned. By equipping myself with knowledge of the past while imagining a rawer and richer future, I had banished my ecological boredom. The world had become alive with meaning, alive with possibility. The trees now bore the marks of elephants; their survival in the gorge prefigured the return of wolves. Nothing was as it had been before. Like the salmon, improbably returning from the void, the depleted an and sea were now gravid with promise. For the first time in years, I felt that I belonged to the world. I knew that wherever life now took me, however bleak the places in which I found myself might seem, that feeling – the sense of possibility and, through possibility, the sense of belonging – would remain with me. I had found hope where hope had seemed absent. 256