The Call of the Wild
Perceptions, history, people & ecology in the emerging paradigms of wilding

This article introduces some key issues of nature conservation and future landscapes in the context of achieving a more wild state of nature. The lessons are drawn from a programme of Sheffield-based research, seminars, conferences and debates extending over 20 years in Britain and linking across Europe. In terms of British and European ecology and biodiversity these are some of the most resonant contemporary debates.

IAN D ROTHERHAM

The work on which this article draws was inspired by the writings of three people in particular, and all have contributed to the ongoing discussions and publications. These three are Frans Vera, Oliver Rackham, and George Peterken.[1, 2, 3, 4, 5] Many others have been involved with perhaps over a hundred leading scholars and practitioners taking part in the related cross-disciplinary events. The outputs from this Sheffield based work address issues of fundamental importance to visions of our future landscapes and their associated ecologies, and the core issues include the eco-cultural nature of landscapes, the roles of grazing herbivores (both domestic and wild) in driving landscape ecology, and the impacts of 'cultural severance' through abandonment or displacement of customary land-use practices across Europe. These are discussed in more detail in the publications cited in the literature.[8,9,10,11,12, 13, 14, 15, 16] The principal mantra of these debates has been 'the need to consider the past, in order to understand the present, and to thus, better inform our visions of future landscapes and tomorrow's ecologies'. I would argue that nature conservation as a movement has hit what long-distance runners describe as 'the wall', and there is a need for a wide church of radical thinking.

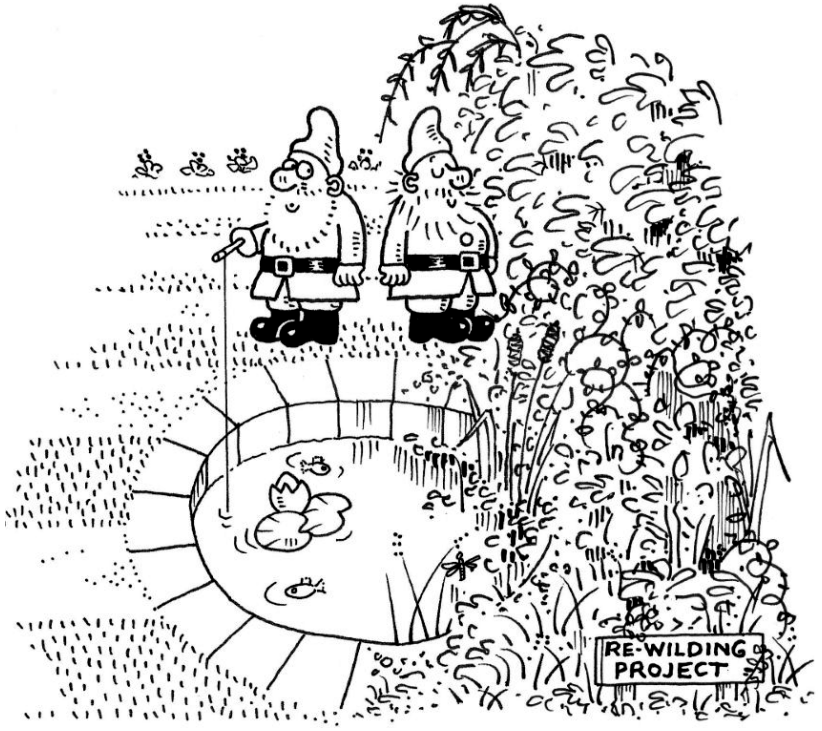
Wild nature – what baseline?

In a recent issue of *ECOS*, Mark Fisher[17] wrote an extended article on 'Wild nature reclaiming man-made landscapes' which was in part a review of my recent edited book, *'Trees, Forested Landscapes and Grazing Animals: A European Perspective on Woodlands and Grazed Treescapes'*.[12] Mark's passionate insights are a breath of fresh air in long-running scientific debates. However, there are issues in some recent discussions on wilder landscapes and wilding, such as a recent seminar in Sheffield on this theme (How can we manage a site's landscape, ecological and human history and safeguard our archaeological and natural heritage?[18]), when

opinion and ideas become mixed and mistaken for fact, history and scientific evidence. There is room for all of these but it is important to recognise where the boundaries lie. One significant error in Mark's otherwise interesting and challenging review article, is the assertion of an "absence of robust evidence in the book (and elsewhere)", which cannot "be replaced by inference alone". As evidenced by the references I provide at the end of this article, the arguments have been developed with the insight of 20 years or more of fieldwork across Britain and Europe, and multi-disciplinary contributions from leading researchers, academics and practitioners at major conferences over the same period. This is not a matter of inference but interpretation of robust evidence and in some cases, particularly detailed, site-based studies. Furthermore, the emerging arguments and evidence, now influencing policies of the EU Council of Minsters[19] UNESCO and FAO, are being addressed at major international conferences (e.g. 1st European Conference for the Implementation of the UNESCO-SCBD Joint Programme On Biological and Cultural Diversity, Linking Biological and Cultural Diversity in Europe, 8-11 April 2014, Florence, Italy), and the Sheffield conference series is part of this on-going dialogue. A key paradigm is how to fit ideas of wilding into both a sensible science-based view of ecological processes, and into a historically valid time-line. From both perspectives 're-wilding' as a term is problematic as most of these landscapes have not been 'wild' for hundreds, and in many cases, thousands of years and ignores the roles of, for example, indigenous peoples and of cultural influences.

Fisher's article also slightly muddles the concept of Shadow Woods or Ghost Woods[14] when he suggest these are "islands of ancient, worked woodland discovered in the English Midlands". In some cases, the shadows are indeed the lost remnants of enclosed, named, medieval woods, but in many examples across a wide area of Great Britain, these are lost wood pastures, (treed landscapes rather than 'woods') which were never enclosed under the Act of Commons. They therefore represent tantalizing glimpses, albeit much altered, of the pre-enclosure landscape. Indeed, it is these fragments, which resonate with many moors, heaths, commons, bogs and fens, and share a common origin with ancient woodlands.

One of my grumbles with some re-wilding arguments is the flights of fancy and romanticised ideas of 'free nature' in the absence of basic understanding of ecological successional processes and landscape changes in highly modified eutrophic environments of the twenty-first century. The work of Philip Grime and colleagues[20] tells us clearly how these ecologies will change. This does not mean they are somehow bad, but we need to view them with open eyes. What we get in terms of landscape and ecological outputs is determined by nature and human interactions; even the decision not to manage a site is a positive management decision. Long-lived dense stands of bracken and heathlands blanketed by species-poor birch growth are options and may be acceptable, but the implications for biodiversity are predictable and involve the loss of many species considered of great value by conservationists. Freeing up nature is also problematic when it involves most highly successful, invasive, exotic species, and often it seems that we only want 'free' nature if it is 'good' nature. (See for example Rotherham and Lambert[21]). Areas in England such as the Peak District and the Lake District certainly



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have a feeling of the 'wild' about them, but they are certainly not 'wilderness' and furthermore, they have not been so for thousands of years.

Setting the scene for catastrophe

From the Amazonian rainforests to the Australian outback, people have depended upon and have influenced Nature over countless millennia. Across Europe and North America for example, our landscapes and their ecologies are not 'natural' but are 'eco-cultural' and the distinct habitats and wildlife, which we value today, have emerged from long-established interactions between people, Nature and the environment. Abandonment of these ecosystems now will lead to inevitable, and predictable, successional changes determined by macro-disturbances, massive eutrophication, and an absence of traditional, locally based utilisation. The results will be simplification, catastrophic species losses, loss of aesthetics, damaged local and regional economies, and impoverished ecosystem services. Above all, abandonment will not lead to some sort of reversion to a mythical, former, pristine condition of pure Nature, but to a plethora of degraded, species-poor, secondary successional endpoints.

Nature and the eco-cultural landscape

In Europe, we are now able to construct a convincing time-line to show how the most diverse, species-rich, and in conservation terms, valuable, sites and habitats

have descended from the ancient ecologies of a primeval landscape. Now highly modified but nevertheless retaining species and ecological diversity of interactions and functions, grasslands, heaths, bogs, fens, woods and forests, were adopted by early peoples, utilised and modified. In an age before petrochemical subsidised agri-industry and forestry, landscapes and ecologies were changed but biomass and nutrients cycles were mostly kept in balance. Once industrialisation took hold with the rise of capitalism, and especially with the importation of energy and chemical nutrients into ecosystems, the pace of change and the irreversible dysfunction of 'cultural severance' kicked in. However, it should not be thought that this suggests that early human cultures and subsistence economies were either environmentally benign, or inherently good for people: they were not. Indeed, the reason for technological advancements being welcomed was that they potentially removed ever-present threats of famine, and freed people from endless physical labour. Yet there are ecological consequences of these slowly evolved relationships, which we do well to consider; and there are important lessons to heed.[11, 22]

The ending of traditional and customary practice

Cultural severance[8,11] is best considered as the end of traditional, local, and often subsistence management and the results are predictable, long-term ecological successions with associated increases in available nutrients and biomass, and rapid declines in biodiversity. The species we are gaining are largely catholic, competitive, ubiquitous ones, which are rapidly acquiring global distributions. We are losing the stress tolerators and the stress tolerant ruderals. We are also seeing simplification of ecosystems and the loss too of species and forms of species associated with long-term utilisation by people. Therefore, in Europe for instance, we have lost most of our coppice woods and associated with that, the demise of associated ground flora, of birds like nightingales, and of woodland butterflies. Ancient wood pastures are abandoned so we lose 1,000-year-old oaks with their unique saproxylic insects, lichens, fungi and more. Heathlands and grasslands such as meadows and pastures, are essentially eco-cultural. When they are severed from people and tradition, they become rank, eutrophic communities of little ecological interest aside from catholic, competitive, opportunists. All these ideas are widely known, and predicted in the work of Philip Grime[20] looking at plant strategies, and by specialists like Nigel Webb considering European heathlands.[15, 16] As these areas are abandoned, the landscapes become contested spaces and local, traditional peoples are squeezed out by capital-intensive land-uses, by absentee landowners, and by leisure or recreation. With biomass increase and eutrophication, and especially with intensive recreational use or urbanisation, many areas become vulnerable to rampant wildfires. From California, to Australia, from Greece, Spain, and Italy to France, and from the Dorset heaths to the Peak District moors, such fires are a direct result of cultural severance and abandonment, and are entirely predictable. Traditional peoples often used regular fires to manage their landscapes, to re-cycle and release precious nutrients, and to provide essential grazing at the right time of year. When European imperialists populated the planet, they generally viewed native, indigenous peoples as ignorant and primitive. In particular, from South African Fynbos to New Zealand, to North America, and to Australia, they suppressed the local fire management of the landscape.[21] Today's catastrophic wildfires are direct consequences and descendants of past cultural severance.

Turning my environmental historian's gaze to Britain, we have the case of the English Lake district, which George Monbiot[23] recently described as an ecological desert (caused by over-grazing by herbivores particularly sheep). George Monbiot (pers. comm.[18]), even suggested that the parts of the Peak District, which I walk every week, are virtually devoid of wildlife and he would see more bird species in his back garden. This is a strange view of the world, which does not accord with the reality of place unless his garden hosts skylarks, meadow pipits, stonechats, wheatears, red grouse, curlews, lapwing, snipe, short-eared owls, kestrels, peregrine, merlins, ravens, snow buntings, cuckoos, whinchats and more; one hell of a garden. I find this view of the world troubling since the southern Lakes are beautiful and ecologically rich almost beyond description. The ancient coppice woods, the meres and mosses, the limestone pavements of Gaitbarrows, the evocative limestone of Whitbarrow Scar, down to Arnside Knott, Leyton Moss and Silverdale, are certainly not an ecological desert. We all know and accept the damage done by intensive over-grazing by sheep, and growing up in the 1970s Peak District I was involved in conservation battles to remediate this. Therefore, we take as read, these impacts, and the dreadful state of many hilltops in mid-Wales for example but this does not mean that all farming or grazing is inherently bad.

History as a great informer

The northern, high ground of the English Lakes is bleak, climatically extreme and highly leached, and is composed of low nutrient, acidic bedrocks. Furthermore, areas such as the Skiddaw massif were intensively exploited for peat turf fuel in the 1500s to the 1800s. Peat turf and peat charcoal were stripped from the hillsides and mountains to fuel the smelting of metals such as copper and iron. Given these hugely significant factors that have formed the landscapes we see today, simply abandoning them cannot be expected to cause much 'improvement', even if the idea of improvement was valid. In areas, which are over-grazed, reduced herbivore pressure may allow some species to recover but only within the confines of the broader environmental stresses.

However, history provides real-time salutary examples of landscape abandonment and its potential impacts. Take the 1950s to 1970s human-induced epidemic of myxomatosis that wiped out millions of exotic rabbits from the British countryside. For ancient pastures, meadows, commons and sheep-walks this released a rapid ecological succession to dense herb and then scrub. The catastrophic loss of many wildflowers, butterflies and other insects, fungi, birds, reptiles and more, is well known to older ecologists who recall the speedy declines and extinctions. These ecosystems had been maintained by rabbit grazing after the ending of traditional management and hence cultural severance during the early to mid-1900s. Removal of the rabbits, an exotic mammal, unleashed a dramatic decline in biodiversity across much of the countryside, and then twentieth-century farming improvement did for much of the rest. This is a well-documented cautionary tale.

Wilder and wilding

There are major difficulties with approaches to conservation which advocate 're-wilding' or 'abandonment'. The first concern is that they may compound the

already desperate decline in biodiversity of the last half-century. Re-wilding itself is a misnomer since it implies a reversion to a former 'natural' state, which in reality is a myth. Re-planting the Great Forest of Caledon for example is a great idea, and one, which catches the emotional senses; if only it had existed, then the whole idea would be even better. Archaeology and history tell us that most of the landscapes, which lack trees in northern Scotland, have done so for 5,000 years or more. These were settled, populated landscapes and not 'wild', 'natural' areas. Separating people from Nature and taking people out of the landscape is wrong on many levels of social, ethical, economic and political processes. We need to re-establish functionality from a local to a landscape level. The essential controls and cycling of energy and nutrients that control the balances of competitors, ruderals, and stress tolerators, have to be re-established if the inevitable successional changes and biodiversity declines are to be avoided. These processes were a part of the primeval landscape of Europe and were maintained or even enhanced through long-established traditional practices over several thousand years.

We also need to break free from the misguided ideas that trees are somehow inherently good for the environment and everything else is either less good or even bad (see for example Rotherham and Bradley[24]). Planted trees are just that, and early phase ecological succession colonisers can bring some associated landscape and conservation benefits, but are often of limited biodiversity and environmental value. Ancient woods, wood pastures, heaths, commons, dunes, meadows, fens, bogs, mires and unimproved pastures provide the complex tapestry of a rich and culturally relevant ecology. Our research indicates how these landscape components have descended and been modified by human activities over millennia from a dynamic European ecology described in part by writers such as Rackham [3, 4], Vera[5] and Peterken.[1, 2] A particular example, which demonstrates the scale of loss and the importance of the human imprint over millennia, is that of the *Lost Fens* of Eastern England.[25] In this book, I quote from James Wentworth-Day amongst others about the consequences for fenland ecology and conservation of taking the fenman out to the fen; an understanding of the implications of cultural severance which was light-years ahead of its time. The challenge now is surely how we integrate the richness we desire, into a sustainable framework of functioning landscapes into the future.

Much good science, practical knowledge and skill, and insight into land-use history has been lost in recent years and cannot easily be re-captured. A result is that site management, even of SSSIs and nature reserves, is often disastrous, and here I agree with Mark Fisher[17], in that misapplication of livestock grazing is often to blame. However, I do not agree that abandonment to nature is the answer and I worry that the current crop of politicians will welcome such a hands-off approach with open arms! Thinking that we no longer need to fund nature conservation because nature can care for itself is a dangerous road down which to travel.

The environmental conditions, which we inherit today, are not 'natural'. For example, soils and waters have been altered by eutrophication, dynamic landscapes with fluid ecologies have been replaced by fixed locations, and their habitat areas have been carved up and are left fragmented and isolated. Furthermore, regular

Overgrown heath with colonising birch

Photo: Ian Rotherham

micro-disturbance effects, which are vital to many species, have been replaced by unpredictable macro-disturbances. Grazing by domestic herbivores or by wild or wilded stock may be beneficial or calamitous for conservation target species, depending on what, how and when. Introducing large herbivores into small, isolated sites cannot be expected to reap ecological benefits. These areas lack the dynamics of larger-scale ecosystems and animal behaviour is not 'natural' because the sites lack large carnivores, which influence and direct feeding patterns and movement of the grazers. Abandoning areas to're-wilding' in the absence of either or both large herbivores or carnivores is also not 'natural' because what remains is an attenuated ecosystem. Devoid of keystone fauna and potentially lacking any traditional management from local people, ecological successions will kick in with predictable results. Nevertheless, this is no more 'natural' than the other options which I have noted. To intervene or not is a management decision for an already highly modified landscape.

Wilding the urban

Something lost from the recent discussions on re-wilding is the urban context of much of Britain and Europe, and the increasingly urban status of people and of Nature. In the 1980s and 1990s, there was a growing movement to allow urban nature and urban greening in Britain but this has been seamlessly replaced by a

new urban horticulture with nature once more manicured and kept in place. The re-colonisation of the city by feral nature is a direct challenge to this corporate control of tidy urban 'green'. Where now the urban wild and what, I wonder, became of Oliver Gilbert's exciting and locally distinctive 'urban commons'?

Wilder by design

We want and indeed need 'wilder' landscapes, but simple re-wilding by abandonment will consign many species to oblivion. The test will be to recognise why these ecosystems have changed, and to apply long-term solutions to re-constructing a functioning 'Nature' that includes people. Given basic sets of ecological parameters, we can easily predict the outcomes and consequences of successional changes with or in the absence of intervention. The successful vision will also require long-term, socio-economic function and socio-political currency; or else it will simply fail. It has been said at meetings to discuss the future of the uplands, that farmers can be done away with and the Pennines for example, would be economically powered by 'ecotourism'.[27, 28] A national newspaper even ran an article, which suggested that herds of reindeer and perhaps Heck cattle might roam the moors and bogs between Sheffield and Manchester, and become an ecotourism spectacle.[29] Such statements show zero knowledge of landscape history, ecological carrying capacity, or animal welfare, or of tourism and economics. Yet many ecologists at the meeting in question seemed convinced that a 're-wilded' Pennines, complete with reindeer, might be a great idea. But most of this rural tourism is based on people visiting traditional landscapes and the monetary flows are through resident, local communities. Tourists come to experience local communities in their landscapes, and to partake of locally distinctive hospitality, cuisine and drinks, not of de-populated, abandoned dereliction. Furthermore, what may be a bleak, forbidding, upland landscape, which is profoundly depressing to one person, may be ecstatically close to heaven for another; our opinions and emotional responses are subjective.

Finally, the idea of abandonment to allow Nature to follow its own course will appeal to the current crop of politicians who see conservation as needless red tape, and environmentalists, (according to George Osborne) apparently as "a sort of Taliban". In a Brave New World with a Big Society, we will no longer need nature reserves, wildlife trusts or conservation officers, and we will not need grants or other monies to pay for all of these. I know plenty of politicians who would love this 'free market ecology'. That alone, is a frightening thought.

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Ian D. Rotherham *is Professor of Environmental Geography and Reader in Tourism & Environmental Change in the Department of the Natural & Built Environment, Sheffield Hallam University. He is Chair of the BES Peatlands SIG. i.d.rotherham@shu.ac.uk*

Wilder By Design*, a major international conference in two parts, addressing issues raised in this article, is in Sheffield 15-16 May 2014 and 9-11 September 2015. It is supported by BANC, BES, IUFRO, ATF, NE and others. We are now inviting contributions for the 2015 conference.*